July 1974 Number 359-Part I

Solar-Geophysical Data prompt reports

Data for June 1974–May 1974

noaa NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION / ENVIRONMENTAL DATA SERVICE / ASHEVILLE, N.C.

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Solar - Geophysical Data

NO. 359 JULY 1974

Part I (Prompt Reports)

DATA FOR
JUNE 1974
MAY 1974

NATIONAL GEOPHYSICAL AND SOLAR - TERRESTRIAL DATA CENTER
BOULDER, COLORADO

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SOLAR - GEOPHYSICAL DATA

No. 359

Issued in two parts

Hope I. Leighton, Editor

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Solar - Terrestrial Data Services Division

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ALERT PERIODS

INTERNATIONAL URSIGRAM
AND WORLD DAYS SERVICE

JUNE 1974

SUMMARY OF THE GEOALERT WWA MESSAGES

Message serial number	Date of issue	Date of observation	Wolf number	10cm solar flux	A index	Active Regions				Outstanding events	Forecasts			Alert Situations
						Location	No. of Flares				Date	Location	Desc*	
						Lat-Long	Total	M	X			Lat-Long		
152	01	31	022	093	21	S14E65	4	3	0	SATELLITE REPORTS INDICATE AT LEAST 3 SMALL M EVENTS. CLOUDS - NO OPTICAL	01	S14E65	E	SOLALERT 01/XX MAGALERT 01/04
153	02	01	019	095	25	S15E55	7	0	0		02	S15E55	E	SOLNIL MAGALERT MINOR 02/04
154	03	02	067	097	17	S14E40	4	0	1		03	S14E40	E	SOLQUIET MAGALERT
						S13E01	0	0	0			S13E01	Q	MINOR 03/04
						S10W02	0	0	0			S10W02	Q	
155	04	03	080	096	19	S15E27	3	0	0		04	S15E27	Q	SOLQUIET
						S13W12	4	0	0			S13W12	Q	MAGALERT 04
						S14W22	1	0	0			S14W22	Q	
156	05	04	107	096	08	S15E13	1	0	0		05	S15E13	Q	SOLQUIET
						S14W25	2	1	0			S14W25	Q	MAGNIL
						S13W36	0	0	0			S13W36	Q	
						S05W32	0	0	0			S05W32	Q	
						N05E05	0	0	0			N05E05	Q	
						S07W12	0	0	0			S07W12	Q	
157	06	05	081	094	06	S14W00	0	0	0		06	S14W00	Q	SOLQUIET
						S13W40	0	0	0			S13W40	Q	MAGQUIET
						N06W40	0	0	0			N06W40	E	
						S14E24	0	0	0			S14E24	Q	
						S11E06	0	0	0			S11E06	Q	
158	07	06	102	093	07	N05E28	0	0	0		07	N05E28	Q	SOLQUIET
						S14W12	1	0	0			S14W12	Q	MAGQUIET
						S08W57	1	1	0			S08W57	E	
159	08	07	105	090	04	S14W26	1	0	0		08	S14W26	Q	SOLQUIET
						N05E14	1	0	0			N05E14	Q	MAGQUIET
						S14W04	0	0	0			S14W04	Q	
						S15W18	0	0	0			S15W18	Q	
						N04E85	0	0	0			N04E85	Q	
160	09	08	088	107	08	S14W40	0	0	0		09	S14W40	Q	SOLQUIET
						N04E01	0	0	0			N04E01	Q	MAGQUIET
						S13W18	0	0	0			S13W18	Q	
						S15W31	0	0	0			S15W31	Q	
						N05E71	0	0	0			N05E71	Q	
161	10	09	121	092	04	S14W58	0	0	0		10	S14W58	Q	SOLQUIET
						N05W14	1	0	0			N05W14	Q	MAGALERT 11/12
						S15W28	0	0	0			S15W28	Q	
						S15W44	0	0	0			S15W44	Q	
						N06E58	1	0	0			N06E58	Q	
						S18W51	2	0	0			S18W51	Q	
162	11	10	103	094	12	S14W72	0	0	0	THE GEOMAGNETIC FIELD HAS BEEN UNSETTLED. A s.c. OCCURRED AT 10/1849Z. THE FIELD IS EXPECTED TO BE ACTIVE, WITH MINOR STORM CONDITIONS OCCURRING INTERMITTENTLY FOR PERIODS OF 12-18 HOURS FOR NEXT 3 DAYS	11	S14W72	Q	
						N05W28	0	0	0			N05W28	Q	
						S14W42	0	0	0			S14W42	Q	
						N06E41	2	0	0			N06E41	E	
						S08W66	0	0	0			S08W66	Q	
						S16W59	0	0	0			S16W59	Q	
163	12	11	79	094	24	N05W44	1	0	0	SMALL FORBUSH DECREASE 11/05-07Z	12	N05E28	E	SOLQUIET
						N05E28	7	0	0			N05W44	Q	MAGALERT 12/16
						S08W82	0	0	0			S08W82	Q	
164	13	12	86	089	24	N05W59	1	0	0		13	N05E13	E	SOLQUIET
						N05E13	0	0	0			N05W59	Q	MAGALERT 13/16
						S08W90	1	0	0			S14E89	Q	
						S14E89	0	0	0					
165	14	13	71	087	21	N05W75	0	0	0		14	N05W75	Q	SOLQUIET
						N06W02	0	0	0			N06W02	E	MAGALERT 14/16
						S12E72	0	0	0			S12E72	Q	
166	15	14	65	086	15	N05W91	0	0	0		15	N05W91	Q	SOLQUIET
						N06W10	2	1	0			N06W10	E	MAGALERT 15/16
						S12E58						S12E58	Q	
167	16	15	40	082	25	N05W26	0	0	0		16	N05W26	Q	SOLQUIET
						S12E43	0	0	0			S12E43	Q	MAGALERT 16/17

* Q=Quiet E=Eruptive A=Active P=Proton C=Caution D=Doubtful O.G.=Other Groups

ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

JUNE 1974

SUMMARY OF THE GEOALERT WWA MESSAGES

Message serial number	Date of issue	Date of observation	Wolf number	10cm solar flux	A index	Active Regions: Location Lat-Long	Active Regions: No. of Flares: Total	M	X	Outstanding events	Forecasts: Date	Forecasts: Location Lat-Long	Desc*	Alert Situations
168	17	16	40	084	13	N05W45	0	0	0		17	N05W45	Q	SOLQUIET
						S12E31	0	0	0			S12E31	Q	MAGALERT 17/20
169	18	17	30	085	16	N05W60	0	0	0		18	N05W60	Q	SOLQUIET
						S12E16	0	0	0			S12E16	Q	MAGALERT 18/20
170	19	18	30	082	09	N05W72	0	0	0		19	N05W72	Q	SOLQUIET
						S12E07	5	0	0			S12E07	Q	MAGNIL
171	20	19	022	080	10	S12W06	3	0	0		20	S12W06	Q	SOLQUIET MAGQUIET
172	21	20	015	081	13	S13W25	0	0	0		21	S13W25	Q	SOLQUIET MAGQUIET
173	22	21	027	079	07	S12W38	2	2	0		22	S12W38	Q	SOLQUIET
						N08E24	0	0	0			N08E24	Q	MAGQUIET
174	23	22	012	080	08	S14W49	2	1	0		23	S14W49	Q	SOLQUIET
						N12E08	1	0	0					MAGQUIET
175	24	23	012	078	09	S13W62	2	1	0		24	S13W62	Q	SOLQUIET MAGQUIET
176	25	24	027	077	10	S13W76	1	0	0		25	S13W76	Q	SOLQUIET
						N10W18	1	0	0			N10W18	Q	MAGQUIET
						S11E14	0	0	0			S11E14	Q	
177	26	25	011	077	07	S13W88	1	0	0	SUDDEN COMMENCEMENT	26	S13W88	Q	SOLQUIET
						N09W30	0	0	0	25/2332Z		N09W30	Q	MAGALERT MINOR RECURRENCE 26/30
178	27	26	013	077	32	S11E69	0	0	0		27	S11E69	Q	SOLQUIET MAGALERT MINOR 27/30
179	28	27	011	080	37	S11E55	1	0	0		28	S11E55	Q	SOLQUIET MAGALERT MINOR 28/30
180	29	28	045	080	20	S10E43	0	0	0		29	S10E43	Q	SOLQUIET MAGALERT MINOR 29/30
						S17E72	3	0	0			S17E72	Q	
						S14E62	0	0	0			S14E62	Q	
						S12E68	1	0	0			S12E68	E	
181	30	29	070	089	16	S11E30	0	0	0		30	S11E30	Q	SOLALERT 30/02
						S17E58	3	0	0			S17E58	Q	MAGNIL
						S13E49	5	0	0			S13E49	E	
						S10E06	2	0	0			S10E06	Q	
182	01	30	111	091	17	S11E20	0	0	0	423FU BURST AT	01	S11E17		SOLALERT 01/02
						S17E46	0	0	0	10 cm 30/2223Z		S17E43		MAGQUIET
						S13E40	11	2	1			S13E37		
						S10W06	3	0	0			S10W03		

RELATIVE SUNSPOT NUMBERS

ZURICH, R_Z

	1973 FINAL						1974 PROVISIONAL					
DAY	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
1	29	36	89	68	31	46	18	13	25	26	48	38
2	31	28	124	66	33	24	15	12	16	20	70	49
3	39	21	130	52	23	24	13	8	16	19	89	55
4	32	28	121	50	20	0	12	7	17	22	103	80
5	42	+34	108	44	7	0	8	0	18	21	106	62
6	56	40	84	38	0	0	0	0	19	23	113	78
7	57	42	77	30	0	0	0	8	20	28	109	70
8	68	40	72	22	0	7	29	16	16	38	106	59
9	38	38	75	23	0	8	36	22	20	58	91	64
10	32	27	58	8	0	16	44	21	30	70	69	61
11	23	23	42	0	7	9	49	21	37	75	64	58
12	14	0	22	0	0	9	60	36	38	78	56	38
13	15	0	0	8	9	8	45	50	30	83	40	48
14	10	0	0	10	11	8	74	26	42	87	35	46
15	16	0	13	16	12	17	77	46	37	98	24	34
16	9	0	26	18	13	26	64	48	23	93	16	25
17	28	0	20	19	16	40	65	47	20	75	8	24
18	42	7	16	15	16	43	52	46	32	64	0	29
19	23	7	8	0	22	41	58	45	20	51	0	32
20	8	7	30	0	16	47	49	43	9	49	0	23
21	8	15	39	0	23	51	37	37	16	43	0	20
22	14	10	48	16	29	51	36	45	31	28	7	11
23	0	17	58	28	39	47	28	35	27	17	9	11
24	9	22	63	36	38	51	16	29	21	19	7	16
25	14	28	74	53	46	53	0	17	18	20	0	15
26	8	38	78	59	62	57	8	20	10	20	20	8
27	9	37	78	53	60	26	0	42	9	38	18	8
28	10	47	80	62	61	12	8	35	17	30	32	19
29	17	56	75	65	64	0	7		19	22	20	30
30	11	64	71	55	59	0	0		25	16	0	52
31	22	82		37		0	0		26		52	
MEAN	23.1	25.6	59.3	30.7	23.9	23.3	29.3	27.7	22.7	44.4	42.3	38.7

1973 yearly mean = 38.0

DAILY SOLAR FLUX AT 2800 MHz
OTTAWA ARO

FLUX ADJUSTED TO 1 A.U., S_a

	1973						1974					
DAY	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
1	90.9	86.9	114.9	109.0	87.0	86.9	71.5	71.8	76.4	72.1	98.5	97.9
2	93.1	86.8	129.2*	106.1	83.9	86.3	73.2	73.1	76.5	71.3	113.1*	100.1
3	93.5	85.0	136.5	103.5	81.1	82.7	73.3	73.1	77.1	71.6	115.5	98.9
4	94.9	86.2	135.0*	94.9	77.4	78.6	72.5	72.9	79.0	73.3	118.0	98.2
5	97.9	85.1	135.1*	90.6*	73.9	73.6	72.1	74.0	78.6	76.3	119.7	96.5
6	99.4	88.8	130.9	85.9	73.2	70.9	74.7	75.4	77.5	80.0	123.0	95.0*
7	99.9	90.8	121.7*	82.2	72.1	70.4	76.0	77.4	76.0	80.2	119.3	92.8
8	97.6*	87.5	115.7	80.1	70.4	70.9	79.7	78.8	77.0	81.1	115.8	95.8*
9	98.6*	87.1	113.1*	79.1	70.4	71.2	84.9	80.8	80.2	87.8	110.0	95.2
10	100.5	83.4	106.7*	77.0	70.7	72.3*	89.2	80.5	86.1	93.5*	105.1	97.0
11	94.0	78.9	96.8	74.9	71.2	71.9	91.0*	77.5	85.9	99.8	104.3	95.3*
12	85.4	76.3	89.5	72.8	70.7	72.5	94.6	76.5	86.2	105.6*	97.1	91.7
13	80.3	74.7	84.6	70.5	72.6	73.1	94.8*	77.3	84.5	102.8	93.5	89.8
14	79.5	74.1	82.9	72.7	73.8	73.8	98.7	76.3	81.9	116.3	95.2	89.1
15	78.7	72.6	82.6	75.7	75.0	76.6	91.8	83.7	82.9	122.9*	94.9	84.7
16	79.5	74.1	83.9	75.6	75.6	79.7	90.8	84.7	81.8	115.0*	80.3	86.2
17	78.1	75.0	81.8	79.5	75.3	82.1	89.2	85.9	82.7	101.8	75.8	87.2
18	83.6	75.3	84.6	78.3	75.5	84.9	87.1	87.5	80.2	98.0	75.2	84.4
19	81.6	75.4	86.6	76.7	75.4	87.8	85.8	82.7	80.0	87.5*	73.0	82.8
20	79.5	76.8	92.0	73.4	76.8	89.9	84.4	82.2	79.6	82.3	72.5	83.8
21	79.4	80.4*	94.9	80.0	80.7	97.6	79.7	82.2	79.1	79.5	71.9	81.4
22	77.6	80.4	99.5	85.0	84.7	96.7*	83.5*	82.2	80.0	75.3	72.2	82.3
23	78.6	81.8	103.9	89.9	86.5	96.0	81.0	84.2	79.8	73.9	71.5	80.2
24	81.5	85.3	106.2	97.6*	87.0	98.1	77.8	80.9	76.6	75.0	72.4	79.1
25	83.8	88.9	112.7	101.0	88.0*	97.6	74.1	78.6	74.3	76.5	72.4	78.8
26	85.0	91.2	115.5	101.8	91.8*	92.9	71.5	76.2	72.6	74.9	79.6	79.6
27	85.5	95.1	115.9	101.7*	88.8	88.6	70.7	76.4	71.8	75.3	85.1	82.4
28	84.2	97.5	118.1	100.7	90.7	81.7*	70.8	75.8	70.4	77.9	87.4	83.8
29	89.5*	100.8	116.5	99.1	94.9	76.4	70.7		71.5	81.6	89.4	89.4*
30	86.1	101.3	116.5*	97.4*	95.7*	74.1	70.8		72.1	91.7	91.3	93.1*
31	86.6	109.6		90.5		72.0	71.3		72.9		95.1	
MEAN	87.2	84.9	106.8	87.1	79.7	81.5	80.4	78.9	78.4	86.7	92.6	89.8

* adjusted for burst

DAILY SOL

JUN

JUN 1974	YEAR DAY	BARTELS 27-DAY CYCLE NUMBER	SUNSPOT NUMBERS		OBSERVED FLUX		
			R_Z	$R_{A'}$	OTTAWA 2800	AFCRL 15400	AFCRL 8800
1	152	4	38	28	95.1	519	281
2	153	5	49	38	97.3	515	280
3	154	6	55	49	96.1	515	277
4	155	7	80	49	95.4	514	280
5	156	8	62	55	93.7	523	274
6	157	9	78	62	92.2*	522	280
7	158	10	70	55	90.1	524	277
8#	159	11	59	63	92.2*	522	293
9	160	12	64	59	92.2	524	276
10	161	13	61	57	94.1	519	282
11	162	14	58	45	92.4*	523	280
12	163	15	38	37	88.9	517	281
13	164	16	48	37	87.0	514	279
14	165	17	46	31	85.4	510	276
15	166	18	34	30	82.1	506	273
16	167	19	25	24	83.5	518	274
17	168	20	24	25	84.5	505	270
18	169	21	29	22	81.7	502	267
19	170	22	32	18	80.2	509	268
20	171	23	23	15	81.1	509	266
21	172	24	20	14	78.8	509	261
22	173	25	11	11	79.7	513	262
23	174	26	11	6	77.6	513	270
24	175	27	16	6	76.6	517	269
25	176	1	15	5	76.3	524	271
26	177	2	8	8	77.0	525	272
27	178	3	8	12	79.7	518	270
28	179	4	18	26	80.3	517	274
29	180	5	30	39	86.5*	508	277
30	181	6	52	51	90.0*	521	280
MEAN			38.7	32.6	86.3	516	275

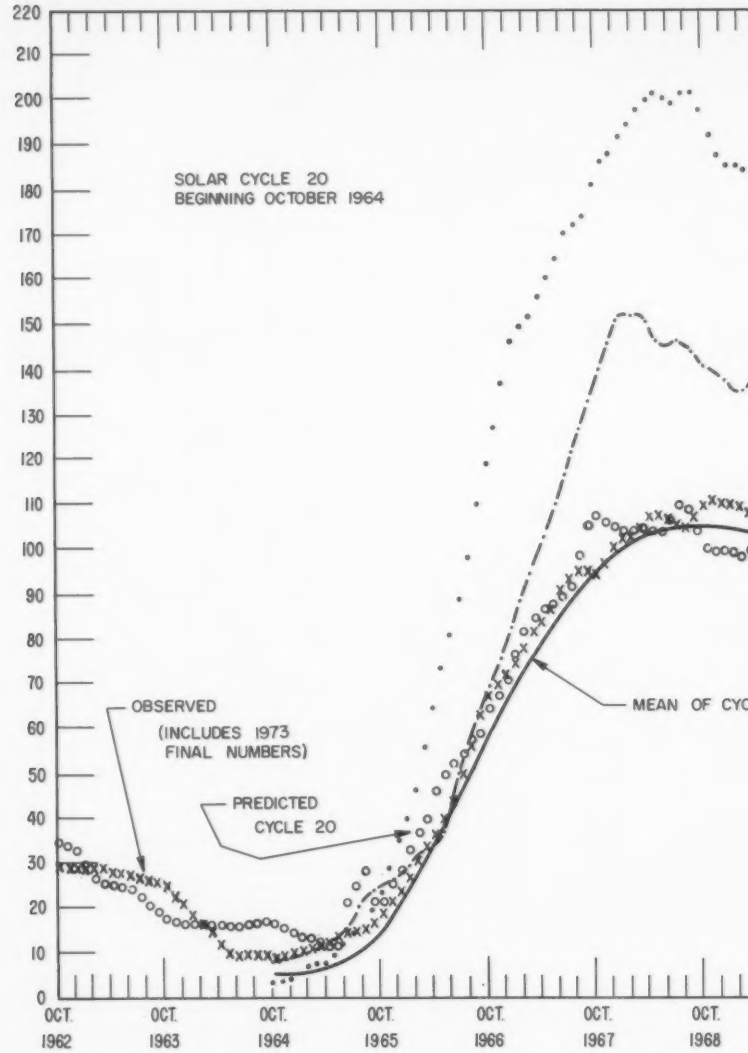
* Corrected for burst.

\# See page 17 for description of unusual solar noise burst.

OLAR INDICES

UNE 1974

SOLAR FLUX ADJUSTED TO 1 A.U.							
CRL 300	AFCRL 4995	OTTAWA 2800	AFCRL 2695	AFCRL 1415	AFCRL 606	AFCRL 410	AFCRL 245
81	138	97.9	91.1	64.5	44.7	21.5	9.7
80	138	100.1	96.2	64.0	45.0	24.3	9.6
77	135	98.9	94.2	64.2	47.4	25.1	9.9
80	135	98.2	91.7	72.6	48.7	26.5	10.5
74	134	96.5	90.3	66.4	46.4	27.1	9.6
80	132	95.0*	89.1	64.7	48.0	27.6	11.8
77	132	92.8	87.9			31.3	10.2
93	145	95.0*	104.7	74.6	49.5	28.9	16.3
76	132	95.1	88.6	62.0	44.1	27.2	13.7
82	136	97.0	89.9	59.9	43.8	25.5	13.2
80	138	95.3*	91.6	62.3	43.3	24.8	12.3
81	132	91.7	84.5	58.3	42.6	29.0	21.1
79	128	89.8	83.5	57.2	42.6	27.5	15.2
76	126	88.1	82.7	57.0	41.4	28.8	15.7
73	124	84.7	79.7	55.4	41.7	27.5	21.9
74	125	86.2	81.9	59.4	43.3	27.3	16.3
70	128	87.2	81.4	59.2	41.1	22.9	14.3
67	125	84.4	80.1	56.7	39.4	25.2	18.5
68	123	82.8	75.9	52.8	39.3	22.7	10.0
66	123	83.8	78.4	55.2	39.0	20.6	8.8
61	121	81.4	77.1	51.7	38.3	22.0	8.5
62	121	82.3	77.5	51.5	38.3	22.9	8.8
70	122	80.2	77.6	51.7	40.5	22.9	9.8
69	119	79.1	75.6	50.3	38.9	23.2	10.1
71	120	78.8	76.4	50.8	38.0	22.8	9.5
72	121	79.6	77.5	51.6	38.7	22.9	10.2
70	123	82.4	79.5	53.2	42.1	24.2	9.9
74	124	83.0	80.6	52.6	40.3	23.7	9.1
77	134	89.4*	86.7	60.7	42.6	23.3	8.8
80	137	93.1*	90.9	57.8	42.0	23.5	9.3
75	129	89.0	84.8	58.6	42.5	25.1	12.1



PREDICTED AND OBSER

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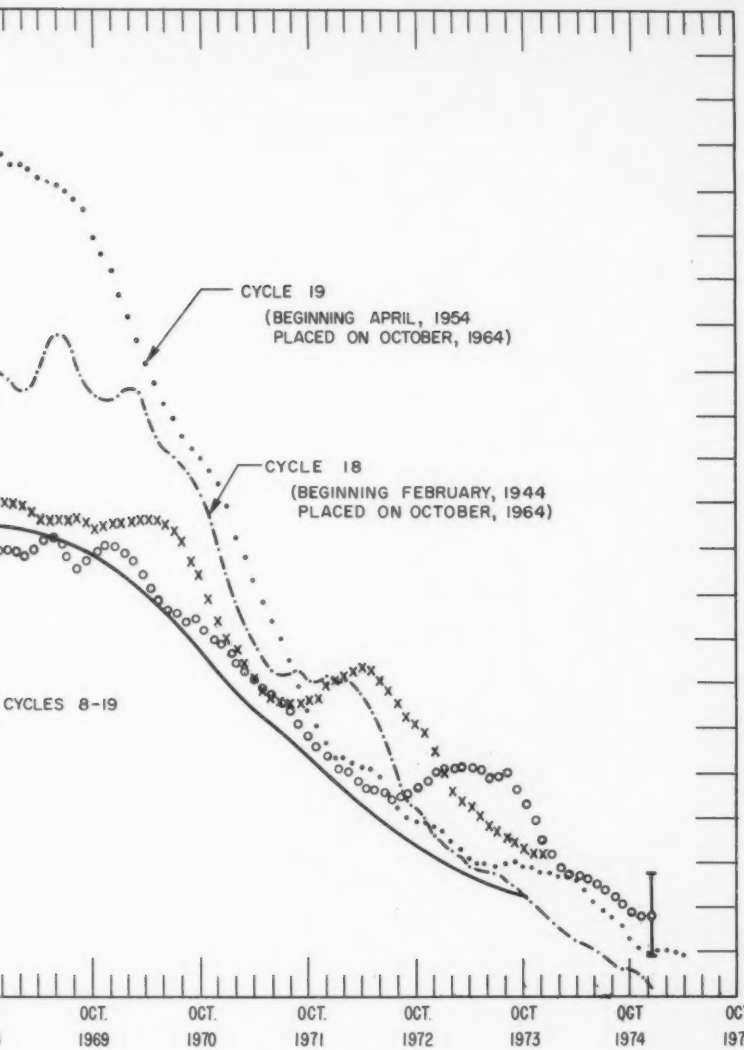


ERVED SUNSPOT NUMBERS

SMOOTHED OBSERVED AND PREDICTED SUNSPOT NUMBERS

CYCLE 20

MONTH	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1964										9.6	10.2	11.3
1965	11.7	12.0	12.5	13.6	14.6	15.0	15.5	16.4	17.4	19.7	22.3	24.5
1966	27.7	31.3	34.5	37.4	40.7	44.6	50.3	56.6	63.1	67.6	70.2	72.7
1967	75.0	78.8	82.2	84.6	87.4	91.3	94.1	95.3	95.3	95.0	97.1	100.6
1968	102.6	102.9	104.7	107.2	107.6	106.6	105.2	104.8	107.0	109.9	110.6	110.1
1969	110.0	109.6	108.0	106.4	106.2	106.1	105.8	106.4	105.4	104.1	104.6	104.9
1970	105.6	106.0	106.2	106.1	105.8	105.3	103.8	101.0	97.2	93.9	89.4	84.1
1971	80.4	77.8	74.4	70.9	68.1	66.7	65.4	64.6	65.8	66.2	66.8	69.4
1972	70.8	71.2	72.4	73.4	72.9	70.5	68.2	65.5	62.2	60.6	58.7	55.1
1973	50.9	46.5	44.2	42.7	40.7	39.1	37.6	36.3	34.7	33.2	32.7	32.6
1974	31.2 (1)	30.0 (3)	29.1 (4)	28.5 (4)	28.1 (5)	27.2 (5)	25.9 (6)	24.3 (7)	22.5 (7)	21.1 (8)	19.7 (9)	18.7 (9)
1975	17.8 (9)	16.9 (8)	16.1 (8)	15.5 (8)	14.7 (8)	14.2 (9)	13.9 (11)					

For each month, the upper figure is the observed or predicted Zürich smoothed sunspot number. The lower figure in parenthesis is the corresponding absolute value of the 90% prediction interval, an indication of the uncertainty above and below the predicted number. Observed numbers are those with no prediction intervals. The observed smoothed sunspot numbers are based on final Zürich numbers through 1973.

The predicted sunspot numbers are derived from a regression analysis based on cycles 8 through 19. Tests indicate that earlier cycles are from a different statistical population. From July 1968 - February 1970 a regression analysis based on cycles 1 through 19 was used because it had not then been proven that two populations exist.

SOLAR FLARES

PARTIAL LISTING

Solar Flares for which at least one observatory has assigned a numerical importance of "1" or greater.

JUNE 1974

OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS					REMARKS
	DATE JUNE	START	END	MAX. PHASE	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %	
PALE	04	0008	0055	0018	S14	W13	.281	12972	3.0	47	1B	2	C		4.69				UDE
RAMY	06	1532	1602	1540	S16	W47	.741	12972	3.1	30	1B	4	C		1.86				DE F
CATA	06	1535	1600D	1540	S16	W48	.752	12972	3.0	25D	3B	3		1540	8.69	13.51		(331)	H
HUAN	06	1538	1559	1546	S14	W46	.726		3.2	21	SB	1	C	1546	.88	1.31			H
RAMY	06	1540E	1555	1545U	S15	W47	.739		3.1	15D	SB	4	V		1.32				DE F
ATHN	06	1540E	1604	1544	S10	W44	.696		3.4	24D	SB	3	V		1.32				F
RAMY	06	1546	1604	1559	S11	W27	.465		4.6	18	SF	3	C		.19				DE
ATHN	07	0914	1013	0929	S14	W27	.479		5.4	59	SN	4	C		1.82				F
TEHR	07	0918E	1000D	0921	S16	W27	.490	12972	5.4	42D	1B	2	C		2.19				F
BUCA	07	0922	0932		S15	W26	.470		5.4	10	SN		P	0923	1.64	1.90			E
CATA	07	0935	1035	0940	S14	W27	.479	12972	5.4	60	1B	3		0940	2.31	2.68		(245)	
CATA	08	1350E	1600D	1450	S13	W64	.898	12972	3.8	130D	3N	3		1450	8.11	19.03		(178)	U
ATHN	14	1416	1456	1422	N06	W08	.206		14.0	40	SN	2	C		2.00				U
HUAN	14	1418	1500	1420	N06	W10	.230		13.8	42	SN	2	C	1420	1.50	1.52			E
RAMY	14	1419E	1454	1423	N06	W09	.218	12993	13.9	35D	1B	4	V		4.95				F
MCMA	14	1419	1455	1422	N07	W09	.230	12993	13.9	36	1B		C	1422	1.96	2.00			F
CATA	14	1420	1510	1420	N06	W09	.218	12993	13.9	50	1B	3		1420	3.48	3.53		(324)	
HERS	14	1432E	1448D	1432U	N06	W10	.230	12993	13.9	16D	1N		P	1441	3.11	3.10			E
RAMY	21	1759	1850D	1822	S20	W25	.505	13002	19.9	51D	1F	3	C		2.06				F S
RAMY	21	1759	1850D	1816	S20	W25	.505		19.9	51D	SF	3	C		1.55				F S
MCMA	21	1805	2034		S20	W27	.529	13002	19.7	149	1N		C	1856	1.65	2.10			F1
PALE	21	1806E	2031	1904U	S21	W26	.525		19.8	145D	SF	2	V		1.86				F
PALE	21	1806E	2031	1807U	S21	W26	.525		19.8	145D	SF	2	V		1.44				F
HUAN	21	1811	1846D		S22	W23	.500		20.0	35D	SN	1	P	1838	.62	.75			E
MANI	22	0306	0352	0343U	S16	W38	.643	13002	19.3	46	1N			0343	1.86	2.47			U2
MANI	22	0306	0352	0321U	S16	W38	.643		19.3	46	SF	2		0321	.62	.82			U
PALE	22	0318E	0320D	0320U	S12	W38	.629		19.3	10D	SF	2	C		.55				U
ATHN	22	0339	0352	0343	S13	W39	.645		19.2	13	SN	2	C		1.65				F
TEHR	22	0339	0352D	0346	S13	W36	.606	13002	19.5	13D	1N	2	C		1.71				U F
MANI	23	0452	0549D	0518	S16	W51	.790	13002	19.4	57D	1B	2		0549	3.09	4.98			FU
MANI	23	0452	0549D	0547	S16	W51	.790	13002	19.4	57D	3B			0547	8.25	13.28			2
ATHN	23	0508	0555D	0546U	S13	W50	.774	13002	19.5	47D	1N	1	V		3.63				F
ATHN	23	0508E	0527	0516U	S13	W50	.774		19.5	19D	SN	3	V		1.16				F
TEHR	23	0515	0636	0539U	S16	W45	.726	13002	19.8	81	1B	3	V		3.09				U F
BUCA	23	0516	0715	0544	S18	W51	.794	13002	19.4	119	3N		C	0544	11.08	18.50			Y
WEND	23	0528E	0709D	0550	S13	W52	.795	13002	19.3	101D	3B		P		49.50				
CATA	23	0605E	0700	0610	S13	W51	.785	13002	19.4	55D	2B	3		0610	6.37	10.53		(288)	U
CATA	24	1505	1525	1515	S10	W70	.940	13002	19.4	20	2B	3		1515	4.05			(204)	
RAMY	24	1507	1547	1513	S14	W70	.941	13002	19.4	40	1N	3	C		2.51				U
HUAN	24	1507	1521	1510	S13	W69	.935		19.5	14	SF	1	C						
ATHN	24	1509E	1551	1515	S15	W72	.952	13002	19.2	42D	1N	3	V		1.32				F H
MCMA	24	1511	1521		S13	W68	.929	13002	19.5	10	SN		P	1515	.31	.90			D
TEHR	24	1515E	1522	1515U	S15	W67	.923	13002	19.6	7D	2N	1	V						F
UPIC	29	1009	1020	1015	S14	E57	.846	13043	2.7	11	1N		P	1015	1.47				
TEHR	29	1115	1140	1118	S12	E58	.853		2.8	33	SN	4	C		.64				F H
UPIC	29	1128	1200U	1133U	S15	E55	.829	13043	2.6	32U	1B		P	1133	1.68				
MANI	30	0709E	0739	0712	S13	E44	.710	13043	2.6	30D	1B	2		0712	2.06	2.98			FE
UPIC	30	0719	0820	0721U	S13	E43	.698	13043	2.5	61	1B		P	0721	2.10				K
PALE	30	2223	2310D	2247	S12	E45	.719	13043	3.3	47D	1B	2	V		1.65				U
PALE	30	2223	2310D	2229	S12	E45	.719		3.3	47D	SB	2	V		1.13				U

Note: Catania and Capri-S express Maximum Intensities in percent of the local undisturbed chromosphere instead of percent of the local continuum. Parentheses are used to indicate this difference.

"Remarks":

A = Eruptive prominence whose base is less than 90° from central meridian.
B = Probably the end of a more important flare.
C = Invisible 10 minutes before.
D = Brilliant point.
E = Two or more brilliant points.
F = Several eruptive centers.
G = No visible spots in the neighborhood.
H = Flare accompanied by a high speed dark filament.
I = Active region very extended.
J = Distinct variations of plage intensity before or after the flare.
K = Several intensity maxima.
L = Existing filaments show signs of sudden activity.
M = White-light flare.
N = Continuous spectrum shows effects of polarization.
O = Observations have been made in the calcium II lines H and K.
P = Flare shows helium D_3 in emission.
Q = Flare shows the Balmer continuum in emission.
R = Marked assymetry in Hα line suggests ejection of high velocity material.
S = Brightness follows disappearance of filament (same position).
T = Region active all day.
U = Two bright branches, parallel (||) or converging (Y).
V = Occurrence of an explosive phase: important and abrupt expansion in about a minute with or without important intensity increase.
W = Great increase in area after time of maximum intensity.
X = Unusually wide Hα line.
Y = System of loop-type prominences.
Z = Major sunspot umbra covered by flare.

SOLAR FLARES

Date, time (UT) and coordinates of Subflares not included in preceding table.

JUNE 1974

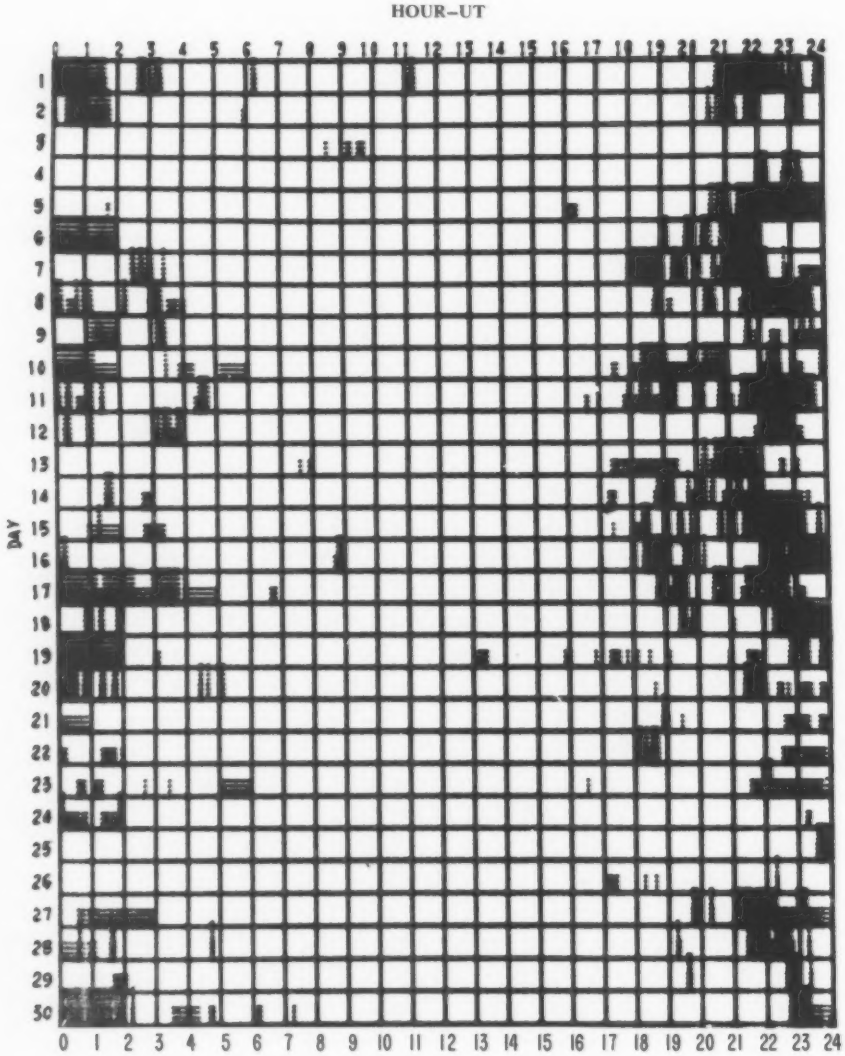
01 0305E S17 E30	01 0423 S13 E65	01 0657 S17 E60	01 0701E S15 E61
01 1154 S14 E60	01 1159E S12 E61	01 1159E S11 E31	01 1540 S12 E56
01 1547E S12 E57	01 1736 S12 E55	01 1851 S12 E55	01 2012 S12 E54
02 0420 S12 E47	02 0527 S14 E48	02 0658 S13 E62	02 0829E S14 E62
02 1610 S14 E39	02 1620E S11 E40	02 1631 S11 E42	02 1631 S14 E42
03 0153 S15 E41	03 0700 S12 E40	03 1510 S16 E24	03 1712 S11 E01
03 1936E S13 W10	03 1951 S15 E33	03 1953 S14 W12	03 1954E S15 E33
03 2002E S14 W10	03 2100 S13 W10	03 2101 S12 W13	03 2220E S13 W13
04 0056 S14 E30	04 1117 S13 E36	04 1117 S15 E25	04 1119E S16 E25
04 1240 N08 E64	04 1240 N05 E64	04 1241 N07 E62	04 2127 S15 E19
05 2041E S08 W41	06 1420 S13 W13	06 1420 S15 W16	06 1421 S14 W15
07 0550 N03 E22	07 0601E N04 E23	07 1132 S14 W20	07 2236E S14 W43
09 1221 N03 E62	09 1348 N05 E64	09 1425 S07 W48	09 1455 N05 W01
09 1836E N10 W43	09 2010 S07 W52	09 2010E S06 W50	09 2019 S06 W50
10 0212 N03 E52	10 0245 N06 W31	10 0304 N04 E39	10 0635 N05 E52
10 1409 N04 E40	10 1723 N05 E43	10 1735 N04 E43	11 0759 N03 W32
11 1117 N03 E36	11 1531 N03 E34	11 1532 N03 E35	11 1739E N03 E34
12 1123E S05 W88	12 1609 N06 W56	12 1611E N10 W52	12 1620 N05 E17
12 1704 N08 W48	13 0623 N08 W67	14 1001 N06 W04	14 1004 N08 W04
14 1540 N05 W82	14 1617 N06 W10	14 1619 N07 W07	16 0409 S14 E38
17 0435 S12 E25	18 0124E S16 E15	18 0453 S16 E13	18 0453 S18 E11
18 0705 S17 E10	18 0735 S17 E16	18 0800 S17 E16	18 1037E S18 E08
19 2200 S12 W08	19 2200 S12 W08	19 2207E S17 W03	19 2235 S16 W01
21 1435E S16 W28	22 0009 S16 W36	22 0013E S12 W35	22 0121 S15 W50
23 0126 S20 W49	24 1226 S05 E72	24 1446 N10 W12	24 1451 N09 W12
25 0620 S09 W76	26 0720E N10 W36	26 0805 N11 W35	26 1120E N11 W37
27 2040 S10 E62	28 0837 S18 E86	28 0839 S14 E78	28 1450E N13 E71
29 0105E S11 E65	29 0105E S11 E65	29 0337 S17 E72	29 0643E S11 E65
29 0825 S15 E53	29 0923 S13 E60	29 0950 S13 E56	29 1040 S18 E56
29 1302E S11 E36	29 1305 S14 E54	29 1315 S09 E13	29 1406 S09 E35
29 1413E S14 E59	29 1440 S09 E13	29 1457 S14 E52	29 1457 S12 E56
29 1506E S13 E59	29 1526 S13 E55	29 1529E S13 E59	29 1745 S12 E52
29 1828 S13 E53	29 1952 S09 E09	29 2103E S13 E50	30 0224E S11 E48
30 0354E S18 E42	30 0356 S14 E46	30 0422 S17 E43	30 0640 S12 E50
30 0706E S13 E44	30 0754 S14 E46	30 0905 S13 E44	30 1536 S13 E48
30 1827E S09 W06	30 1941 S14 E37	30 1944 S09 W06	30 1954 S14 E36
30 2040 S16 E37	30 2057 S09 W05		

01 0829 S15 E59	01 1153E S14 E58		
01 1540 S13 E56	01 1541 S12 E53		
01 2013E S14 E53	02 0419 S14 E48		
02 0957E S13 E49	02 1154 S12 E58		
02 1902E S10 E45	02 2210E S16 E42		
03 1735 S16 E32	03 1736 S14 E32		
03 1958 S13 W11	03 2002E S14 E32		
03 2220E S13 W13	03 2344 S13 W12		
04 1120 S15 E23	04 1137 S11 W14		
04 2134E S15 E18	05 1953E S08 W41		
06 1422E S12 W17	06 1422E S13 W13		
07 2239E S15 W45	09 1220 N06 E60		
09 1601 S07 W49	09 1833 N14 W48		
09 2105E N15 W50	10 0115E N06 E56		
10 1324 N04 E40	10 1325E N02 E42		
11 1115 N03 E36	11 1115 N02 E35		
11 1930E N06 E23	11 1937 N04 E32		
12 1704 N06 W56	12 1704 N03 W50		
14 1015 N07 W04	14 1538 N03 W80		
16 0409 S17 E37	16 1214 S17 E37		
18 0702 S16 E12	18 0704E S18 E10		
18 1319 S12 E05	19 1840E S20 E02		
21 1426 S17 W27	21 1428 S18 W32		
22 0205E N09 E22	23 0121 S16 W50		
25 0613 S12 W68	25 0615 S13 W76		
27 0802 S12 E74	27 0803 S14 E76		
28 2050 S16 E65	28 2352 S13 E63		
29 0643E S13 E59	29 0807 S11 E39		
29 1123E S18 E72	29 1302E S16 E12		
29 1408E S16 E36	29 1411 S14 E54		
29 1458 S12 E57	29 1459E S13 E55		
29 1746 S13 E54	29 1747 S14 E52		
30 0233E S13 E48	30 0352 S16 E43		
30 0643 S13 E51	30 0645E S13 E47		
30 1538E S12 E45	30 1635E S10 W02		
30 2023 S13 E44	30 2029 S14 E37		

INTERVALS OF NO FLARE PATROL OBSERVATION

FOR PRECEDING SOLAR FLARE TABLE

JUNE 1974



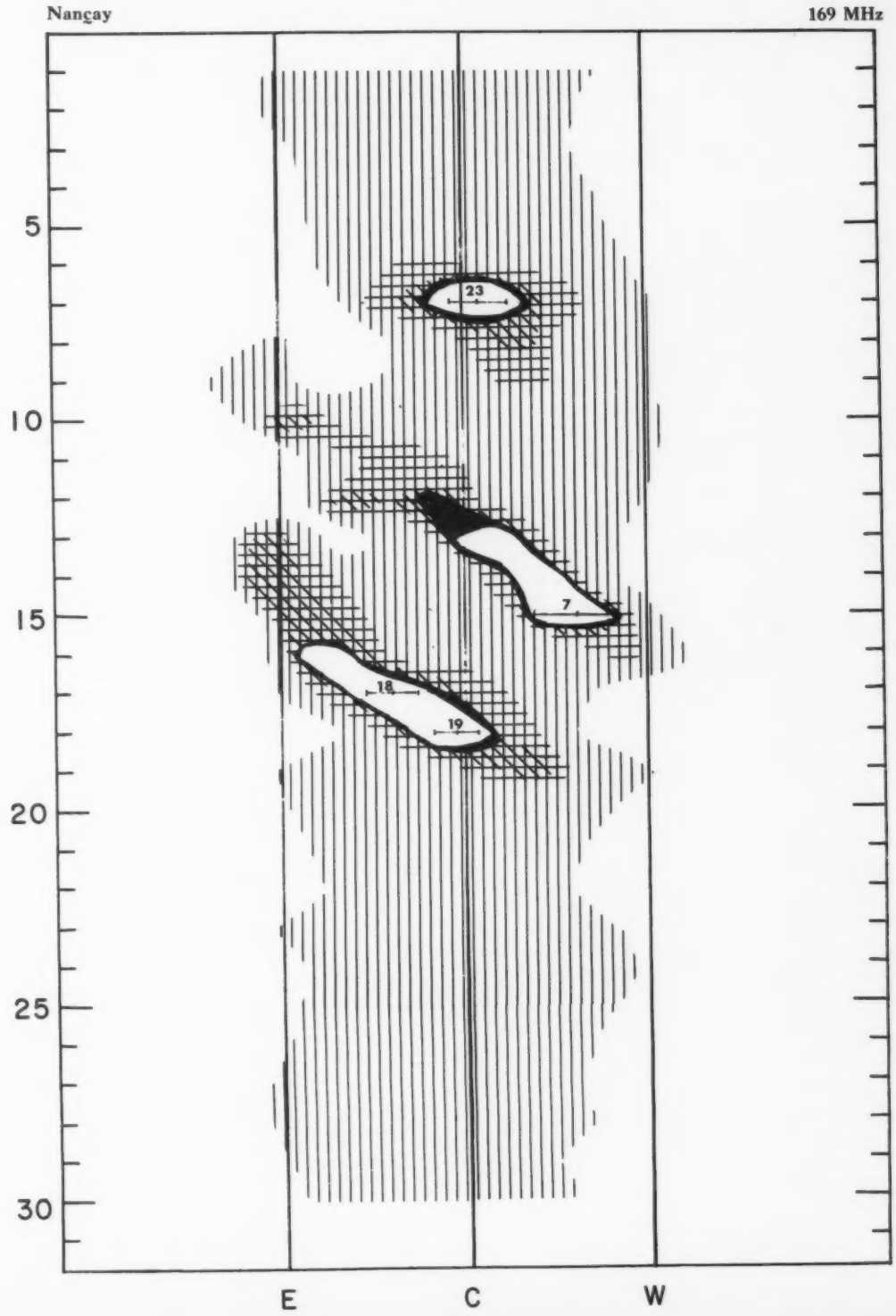
Observatories included in total patrol:

Athenes	Herstmonceux	McMath-Hulbert	Ramey	Wendelstein
Bucharest	Huancayo	Mitaka	Teheran	
Catania	Manila	Palehua	Upice	

Times of no flare patrol are shown by the shaded area for each day divided into times of no cinematographic patrol (bottom half of day) and times of neither visual nor cinematographic patrol (top half of day).

SOLAR RADIO EMISSION
INTERFEROMETRIC OBSERVATION

JUNE 1974



EAST - WEST SOLAR SCANS

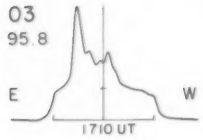
June 1974

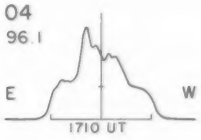
ALGONQUIN RADIO OBSERVATORY
CANADA

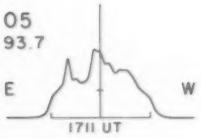
10.7 cm
Fan Beam with 1.5 minutes of arc
E - W Resolution

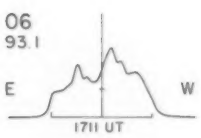
NO DATA

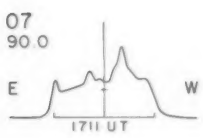
NO DATA

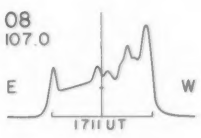


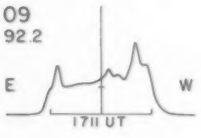


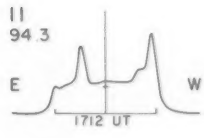


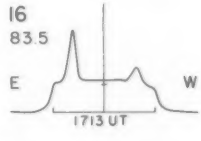


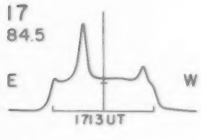


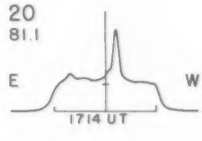


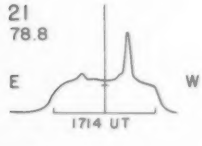


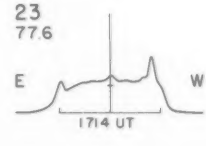


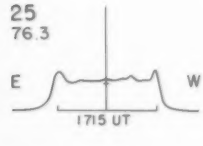


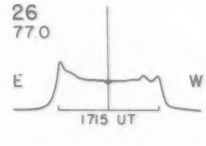


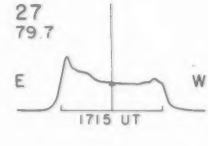


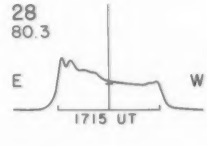


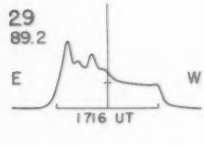


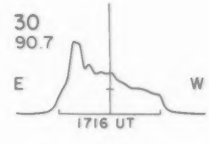


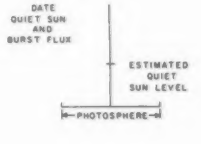












SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

JUNE 1974

JUN 1974	FREQUENCY STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} MEAN	INT	REMARKS
1	2800 OTTA	8	1154.4	1154.4	.5	1.6	0.8		
	2800 OTTA	27	1535		95	.8	0.7		
	2800 OTTA	24	1535	1548	13	.8	0.4		
	2695 BOUL	3	1543.5	1546	5.5	6.0	2.0		
	2800 OTTA	24	1548		62	.8			
	2800 OTTA	26	1650	1710	20	- .8	-0.4		
	2800 OTTA	21	1720	1847	155	1.8	1.0		
	2800 OTTA	20	1735	1740	11	.8	0.4		
	2800 OTTA	20	2000	2025	60	1.8	0.9		
	2800 OTTA	27	2105		105	.8	0.7		
	2800 OTTA	24	2105	2120	15	.8	0.4		
	2800 OTTA	24	2120		70	.8			
	2800 OTTA	1	2147	2147.8	1	1.0	0.5		
	2800 OTTA	26	2230	2250	20	.8	0.4		
	2695 PENT	25	2330	0018	105	4.0	2.0		
2	8800 MANI	4	0042.5	0047.7	7.9	58.0	7.3		2 SPA
	2695 MANI	2	0042.5	0047.7	7.9	9.2	1.7		
	2695 BOUL	45	0042.5	0048.5	14	8.0	2.0		
	2695 PENT	45	0042.6	0047.8	8.4	6.0	2.2		
	2695 PENT	29	0051	0051	7	1.0	0.5		
	2695 BOUL	3	0107	0108	1.5	4.0	1.0		
	2695 BOUL	3	0113	0135	2.5	3.0	1.0		
	2695 PENT	24	0118		30 D	4.0			
	8800 MANI	47	0424.4	0426.1	7.8	1250.0	275.0		3 SPA
	2695 MANI	4	0424.5	0426.2	11	360.0	90.0		
	2800 OTTA	1	1630.5	1630.7	2	2.4	1.2		
	2800 OTTA	21	2140	2240	100	2.6	1.4		
	2800 OTTA	1	2201	2202	2	1.4	0.7		
	2695 BOUL	3	2202	2203	2	4.0	1.0		
	2800 OTTA	20	2207	2211	24	5.0	2.5		
	2695 BOUL	21	2209	2212	10	6.0	2.0		
	2695 PENT	32	2350	0020	105	-3.6	-1.8		
3	2800 OTTA	1	1508	1508.1	1	1.8	0.9		
	2800 OTTA	21	1708	1723	36	1.4	0.7		
	2800 OTTA	20	1734	1736	10	1.4	0.7		
	2800 OTTA	20	1918	1919	10	1.6	0.8		
	2800 OTTA	23	1934	2015	75	3.2	1.8		
	2800 OTTA	22	1950	1954.5	15	7.0	2.6		
	2695 BOUL	45	1950.5	1955.5	14.5	8.0	2.0		
	2800 OTTA	26	2105	2200	55	-1.8	-0.9		
	2800 OTTA	24	2215	2220	5	1.8	0.9		
	2695 PENT	27	2215		190	1.8	1.7		
	2695 PENT	24	2220		165	1.8			
	2800 OTTA	20	2227	2232	23	1.8	0.9		
	2695 BOUL	3	2228	2232.5	12.5	4.0	1.0		
	2695 PENT	21	2338	2350	87	5.8	2.6		
	2695 BOUL	3	2350	2352.5	5	4.0	1.0		
4	2695 BOUL	45	0006.5	0013.5U	39	57.0U	14.0U		
	2695 PENT	4	0008	0012	14	71.0	24.0		
	2695 MANI	4	0008.6	0011.9	12.8	46.9	13.4		
	8800 MANI	4	0009.5	0011.1	9.6	17.5	8.8		3 SPA
	2695 PENT	30	0022	0022	33	7.0	3.5		
	2695 PENT	2	0031	0031.5	5	7.0	1.8		
	2695 MANI	1	0032	0032.5	3.5	6.0	2.0		CONT
	2695 PENT	26	0105	0125	20	-1.8	-0.9		
	8800 SGMR	1	1117.9	1118	4.6	4.2	1.3		
	2800 OTTA	45	1117.5	1118.1	2.7	11.4	6.4		
	2695 SGMR	22	1117.4	1118.1	15.1	9.2	5.5		
	2800 OTTA	29	1120.2	1120.2	180	3.8	1.7		
	2800 OTTA	20	2125	2130	80	2.8	1.6		
5	2800 OTTA	20	1420	1432	38	1.2	0.6		
6	2695 BOUL	45	1538.5	1542.5U	8.5	58.0U	23.0U		
7	2695 SGMR	3	2116.3	2116.6	.5	13.7	4.1		
8	2800 OTTA	22	1320	1510	750 D	14.8			
	2695 BOUL	3	2347.5	2351	5	4.0	1.0		
9	2800 OTTA	67	1458		70	1.2			
	2695 BOUL	3	1832.5	1835	5	3.0	1.0		
	2800 OTTA	1	1833	1834.5	7	2.2	1.0		
	2695 SGMR	1	1833.3	1834.4	2.8	2.6	.8		
10	2800 OTTA	21	1140	1320	135	1.2	0.9		
	2695 SGMR	20	1323.1	1327.4	10.6	2.1	.8		3G
	2800 OTTA	8	1326	1326.2	.5	1.8	0.9		
	2800 OTTA	27	1445		235	1.8	1.6		
	2800 OTTA	24	1445	1525	40	1.8	0.9		
	2800 OTTA	24	1525		175	1.8			
	2695 SGMR	21	1650.2	1747.6	96.7	7.1	3.6		3
	2800 OTTA	21	1715	1740	60	2.8	1.6		
	8800 SGMR	21	1718.3	1720.6	65.7	12.3	6.2		3
	8800 SGMR	3	1742.8	1742.9	2.2	10.7	3.2		3
	2800 OTTA	3	1742.8	1743.5	1.5	11.2	3.8		3
	2695 SGMR	4	1742.8	1743.5	2.4	10.2	3.1		

Note: 67 = oscillation (see example on page 22).

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS
JUNE 1974

JUN 1974	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	REMARKS
	2695	BOUL	8	1743	1744.5	4.5	11.0	4.0		
	2800	OTTA	26	1820	1840	20	-1.8	-0.9		
	2695	PENT	24	2005	2015	10	1.0	0.5		
	2800	OTTA	24	2015		135	1.0			
	2800	OTTA	20	2100	2120	40	1.4	0.7		
	2695	PENT	24	2230	2325	55	1.8	0.9		
	2695	PENT	24	2325		140 D	1.8			
11	2800	OTTA	1	1116.2	1117.2	1.5	3.0	1.5		
	2800	OTTA	29	1118	1118	27	1.6	0.8		
	2800	OTTA	1	1530.5	1531.5	1.5	.6	0.3		
	2800	OTTA	20	1600	1655	150	2.2	1.1		
12	2695	PENT	20	2300	2350	80	1.2	0.6		
13	2695	PENT	1	0115	0115.5	1	1.2	0.6		
	2695	PENT	1	0135.8	0136	1	1.2	0.6		
	2695	BOUL	21	1419	1422.5	26	22.0	6.0		
	2800	OTTA	20	2025	2035	55	1.4	0.7		
14	8800	SGMR	20	1418.8	1430.4	26.2	12.9	6.5		3
	2695	SGMR	21	1418.7	1422.8	28.3	7.8	3.9		3
	2800	OTTA	3	1419	1421.3	3.5	19.4	11.0		
	2695	SGMR	3	1419.2	1421.1	3.1	17.4	5.2		
	2800	OTTA	8	1421.2	1421.2		5.8			
	2695	PENT		1421.2	1421.2	3.5				NULL
	2800	OTTA	29	1422.5	1422.5	43	7.8	3.4		
	2800	OTTA	20	1615	1616.5	19	1.2	0.6		
16	2695	BOUL	3	2352.5	2353.5	4	3.0	1.0		
17	2800	OTTA	8	1349.5	1349.8	.5	2.4	0.8		
	2800	OTTA	2	1726	1727	2	1.8	0.9		
	2695	PENT		1726	1727	2				NULL
	8800	SGMR	4	1846.2	1846.6	.8	19.6	5.9		3
	2800	OTTA	1	1846.5	1846.7	1	5.2	1.8		
	2695	SGMR	1	1846.4	1846.7	.9	3.1	.9		3
	2695	BOUL	8	1847	1847.5	:	6.0	2.0		
18	8800	MANI	1	0121	0121.3	.7	7.0	1.7		
	2695	PENT	8	0121	0121.3	.6	8.6	2.2		
	2695	MANI	4	0121	0121.5	1.3	12.5	1.9		
19	2800	OTTA	23	2100	2243	175 D	10.0			
	2800	OTTA	1	2213	2213.5	2	1.8	0.9		
	2800	OTTA	8	2214	2214		2.0			
	2800	OTTA	1	2220	2220.5	1	1.0	0.5		
	2800	OTTA	20	2258	2300	14	3.4	1.6		
21	2800	OTTA	22	1422	1440	70	2.8	1.4		
	8800	SGMR	22	1757	1901.3	118.3	13.2	7.9		
	2800	OTTA	21	1802	1920	250	8.4	5.0		
	2695	SGMR	22	1804.9	1825	172.8	10.4	3.1		
	2800	OTTA	22	1813	1825	30	5.6	2.8		
	2695	BOUL	45	1814.5	1825	16.5	5.0	2.0		
	2800	OTTA	8	1821	1821		652.0			
	2695	PENT		1821	1821					NULL
	2695	BOUL	3	1852.5	1855.5	6	3.0	1.0		
	2800	OTTA	1	1853	1855	5	1.8	0.9		
22	2695	MANI	4	0341	0341.5	1.5	11.5	4.4		
	2800	OTTA	20	1552	1555	16	.8	0.4		
	2800	OTTA	22	1716	1720	24	1.6	0.8		
	2800	OTTA	20	1845	1857	25	1.0	0.5		
23	2695	MANI	2	0515.1	0515.5	2.1	9.7	1.9		
	8800	MANI	22	0541.5	0548	15.8	17.3	3.5		3 SPA
	2695	MANI	4	0541.5	0544.4	8.5	34.9	4.9		
24	2800	OTTA	21	1506	1508	24	1.6	0.8		
	2800	OTTA	8	1507.3	1507.3		1.4			
	2800	OTTA	8	1508.5	1508.5		3.4			
25	2695	SGMR	1	1717.2	1717.4	.5	2.6	.8		
28	2695	PENT	24	0030	0140	70	2.6	1.3		
	2695	BOUL	3	0136	0136.5	:	4.0	1.0		
	2695	PENT	24	0140		10 D	2.6			
29	2695	BOUL	8	0018.5	0019	1.5	8.0	3.0		
	2800	OTTA	22	1040 E	1110	50 D	4.0			
	2800	OTTA	20	1135	1207	90	3.8	1.9		
	2800	OTTA	24	1410	1522	72	3.0	1.2		
	2800	OTTA	21	1434	1459	48	1.6	0.8		
	2800	OTTA	2	1459.7	1501.5	3	2.8	1.3		
	2695	BOUL	3	1459	1502.5	5.5	5.0	2.0		
	2695	SGMR	2	1459.2	1501.9	4.1	2.9	.9		3.SWF
	2800	OTTA	24	1522		460 D	3.0			
	8800	SGMR	2	1527.6	1528	.8	6.4	2.5		3G
	2800	OTTA	4	1527	1528	3	12.0	3.0		

Note: 67 = oscillation (see example on page 22).

SOLAR RADIO EMISSION
SELECTED FIXED FREQUENCY EVENTS

JUNE 1974

JUN 1974	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	REMARKS
	2695	SGMR	4	1527.3	1528.2	3	11.9	3.6		3G
	2695	BOUL	8	1528.5	1530	3	11.0	3.0		
	2800	OTTA	8	1531.2	1531.4	.5	2.2	1.1		
	2800	OTTA	20	1534	1600	118	4.0	2.0		
	2800	OTTA	22	1935		110	2.6	1.3		
	2800	OTTA	1	2143	2143.2	1	1.6	0.8		
	2800	OTTA	20	2240	2300	25 D	2.4			
30	8800	MANI	1	0228	0230.5	8.2	8.7	3.5		2 SPA
	2695	MANI	3	0228	0230.4	8.2	25.2	8.4		
	8800	MANI	3	0705.7	0707.5	6.5	46.6	13.8		3 SPA
	2695	MANI	4	0705.4	0707.3	6.8	16.8	5.9		
	2695	MANI	1	0803.2	0803.5	.8	6.7	2.5		
	2800	OTTA	27	1532		120	1.4	1.2		
	2695	SGMR	46	2208.8	2224.9	23.2	480.0	96.0		3G+SWF
	2695	SGMR	46		2229.6		269.0			3G+SWF
	8800	SGMR	47	2217.3	2225.4	14.7	503.0	242.0		3G+SWF
	8800	SGMR	47		2229		605.0			3G+SWF
	2695	MANI	46	2221.8	2225	14	415.0	210.0		
	8800	MANI	47	2222.8	2228.9	13	620.0	290.0		3 SPA
	2695	BOUL	45	2222	2226.5	85	302.0	60.0		
	8800	SGMR	30	2232	2232	37.5	35.9	10.8		3G+SWF
	2695	SGMR	30	2232	2232	37.3	57.0	17.1		3G+SWF
	8800	MANI	30	2235.8	2235.8	52.5	55.0	13.8		
	2695	MANI	30	2235.8	2235.8	26.2	19.1	4.2		
	2695	SGMR	4	2244.7	2248.1	7.1	75.9	22.8		3G+SWF
	8800	SGMR	4	2246.1	2247.9	4.9	55.5	15.4		3G+SWF
	8800	MANI	4	2246.1	2247.9	4.8	215.0	61.0		
	2695	MANI	4	2246.3	2247.9	4.2	61.0	20.8		

Observatories:

BOUL = Boulder MANI = Manila OTTA = Ottawa ARO PENT = Penticton SGMR = Sagamore Hill

Explanation of Type Code:

1 Simple 1	6 Minor	22 Simple 3F	27 Rise and Fall	32 Absorption	44 Noise storm in Progress
2 Simple 1F	7 Minor +	23 Simple 3AF	28 Precursor	40 Fluctuation	45 Complex
3 Simple 2	8 Spike	24 Rise	29 Post Burst Increase	41 Group of Bursts	46 Complex F
4 Simple 2F	20 Simple 3	25 Rise A	30 Post Burst Increase A	42 Series of Bursts	47 Great Burst
5 Simple	21 Simple 3A	26 Fall	31 Post Burst Decrease	43 Onset of Noise Storm	48 Major
					49 Major +

UNUSUAL, LONG DURATION AND LOW INTENSITY MICROWAVE BURST FOR JUNE 8, 1974

A.E. COVINGTON

The flux calibrations on 8 June at 1400, 1700 and 2000 UT are all much higher than those for either the preceding or following days. Examination of the record from ARO shows that a Gradual Rise and Fall burst commenced at 1320 UT, reached a peak at 1510 of 14.8 sfu above the preburst level of 92.2 units and then slowly and uniformly declined until a level of 8.3 units was reached at 2300. The record from DRAO confirms this slow decay to a stationary level and after observations had terminated at ARO, shows a new gradual rise commencing at 2400, reaching a level of 12 excess flux units at 0002 on 9 June when observations at this station also terminated. The preburst level of 92.2 is close to values observed on the day before and the day after, and is the value taken for the quiet sun flux of the sun at 1700 on June 8. This type of event, of very long duration and low intensity, probably explains the erratic behaviour of the Slowly Varying Component when the daily flux values were obtained from a much shorter observing day, for example on April 7, 1947. Other examples of this type of event occurred on 15 June 1972 and 7 August 1972.

The burst profile on the ARO record suggests the GRF classification followed by an enhanced level (Simple 3 followed by a Post Rise enhanced level). The second burst incompletely recorded, however, results in an ambiguity since two categories could be used for the whole period of enhanced flux, a Simple 3F burst as was frequently done in the past, or the complex burst on the assumption that the second enhancement would be the last one. The complex type for multiple peaked events of long duration has only recently been used.

INFERRED IP MAGNETIC FIELD

BARTELS ROTATION	DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1893	1971 DEC 20	T	A	A	A	A	A	A	A	T	T	T	T	-	T	T	T	T	T	T	T	T	T	T	-	T	T	T
1894	1972 JAN 16	T	A	A	A	A	T	T*	T	T	T	T	T	T	T	T	T	T	A	A	A	T	T	T	T	T	TA	A
1895	FEB 12	A	T	A	A	A	A	T	T	T	TA	A	-	A	T	T	T	T	TA	A	T	T	T	T	T	TA	A	A
1896	MAR 10	A	A	A	A	A	A	A	A	A	A	A	T	A	T	T	T	T	A	A	T	T	T	T	T	T	A	A
1897	APR 6	A	T	T	A	T	T	T	T	T	T	T	T	T	A	T	T	A	A	A	A	A	-	A	A	T	TA	A
1898	MAY 3	A	A	A	-	A	T	T	T	T	T	T	T	T	A	A	T	A	A	A	A	A	T	A	T	T	A	T
1899	MAY 30	A	A	*	A	A*	T	T	A	T	T	T	A	-	-	-	-	-	T	-	A	A	T	T	T	T	TA	A
1900	JUN 26	A	A	A	A	A	A	A	AT	T	T	T	TA	A	T	T	A	A	A*	A*	A	T*	T	T	T	T	T	TA
1901	JUL 23	A*	A*	A*	A	A	A	A	A*	T	T	A	A	A	-	A	T	T	T	T	T	A	T	T	T	T	A	-
1902	AUG 19	-	-	A	A	A	A	A	T	A	A	A	A	T	A	A	A	T	T	T	T	A	A	T	A	A	A	-
1903	SEP 15	A	T*	A	A	A	A	A	T	A	A	A	-	-	-	-	-	T	T	T	T	T	-	T	A	A	A	T
1904	OCT 12	T	-	-	A*	T	T	T	A	A	T	A	A	A	A	A	AT	T	AT	T*	T	-	A*	AT	T	T	*	A
1905	NOV 8	A	A	A	AT	AT	AT	T	T*	A	A	A*	AT	A	A	AT	T	T	TA	T	T	T	A	A	A	A	AT	T
1906	DEC 5	T	T	AT	-	-	T	T	AT	-	T	T	A	-	-	T	TA	A	T	T	T	A*	T	T	T	T	AT	T
1907	1973 JAN 1	T	T	T	T	T	T	T	-	AT	T	-	-	TA	A	A	A	A	A	T	-	-	T	-	T	-	T	T
1908	JAN 28	T	A	T	T*	T	T	T	T	A	TA	A	A	AT	TA	AT	TA	AT	-	A	A	T	T	T	T	T	T	T
1909	FEB 24	T	T	TA	T	T	-	TA	A	A	T	A	A	A	AT	A	A	A	TA	A	A	TA	A	A	T	T	T	T
1910	MAR 23	T	T	T	A	T	T	T	TA	A	TA	A	A	-	A	A	TA	A	A	AT	T-	-	T	T	T	T	T*	T*
1911	APR 19	T	AT	T-	T	T	T	A	T	T	TA	A	A	A*	A	AT	TA	A*	T	A	TA	T*	AT	A	T	A	T	A*
1912	MAY 16	T	T	T	T	T	T	TA	T	A	AT	T	A	A	A	A	A	A*	A	A	A	A	T*	-A	A	-	T	T
1913	JUN 12	T*	T	-	T	T*	A	T	T*	T*	T	T	AT	A	A	T	-	T	A	A	A	A*	AT	-	T	A	A	T
1914	JUL 9	T	T	A	T	T	A	T*	T*	A	AT	-	A	T	TA	T	T	T	A	A*	A	A*	TA	A	TA	T*	T*	T
1915	AUG 5	T	A	A	AT	A	T	T*	T	*	AT	T	AT	T	A	TA	T	T	A	A	AT	A*	AT	A	A	TA	A*	A
1916	SEP 1	TA*	T	T	AT	A	TA*	A	*	T	T	T	A	A	A	T	T	T	A	T	A	A*	A	T*	A	A	A*	A
1917	SEP 28	A*	A	AT	T	T	A*	A	A	A	A	T*	A	AT	A*	AT	T*	AT	AT	T	T	T*	T	T	T*	T	T	T*	T	T	T*	T	T	T*	T	T	T*	T	T	T*	T
1918	OCT 25	T*	T	T*	T	A	TA	A*	A	A*	T	A	T	T*	A	T	A	TA	A*	A	A*	A	T	A	TA	T	T*	T	A	A	A	A	AT	A	AT	TA	A*	T	A*	-	A	A
1919	NOV 21	A	*	T*	T	T	-	A	A	A*	A	AT	T	A	T	A	T*	A	TA	A*	A	A*	A	A*	A	T	TA	T	T	T	T	T	T*	T	*	T*	T	T	T	TA	TA	A*	A	T	T
1920	DEC 18	T	T	AT	A	A	T	A*	T	A	TA	A*	T	A*	*	A	A	A	*	AT	T	T*	T	T	T	T	T	T	*	T	T	T	T	T	T	A	T	AT	T	T	A	T	A*	T	AT	T
1921	1974 JAN 14	T	A	A*	T	-	T	T	A	A	T	A	A	A	A	A*	A	-	A	A	-	AT	-	T*	T	T*	TA	T	*	T	A	T*	T	T	T	A*	-	T	-	T	TA	A	-	-	-	T	T	T	-	T	-	T	-	A
1922	FEB 10	A	-	A	-	-	*	A	A	A	A	A	A	A	A	TA	T	-	A	-	A	-	*	T	T	T	T	T	-	A	-	-	T	T	T	T	T	T	TA	T	T	T	T	T	T	T	T	T	T	A	A	A	A
1923	MAR 9	A	A	A	A	A	A	A	A	A	A	A	A	T	T	TA	TA	A	AT	A	A	A	A	T	A	T	TA	T	A	T	T	A	T	A	T	A	A	T	A	T	T	T	T	T	T	T	TA	T	T	TA	T	TA	TA	-	A	TA
1924	APR 5	A	A	A	A	A	-	TA	A	A	A	A	A	A	A	A	*	A	A	A	A	A	A	A	T	T	TA	TA	TA	T	T	T	T	T	T	T	T	T	T	T	T	T	T	A	TA	A	AT	T	A	A	A	-	-	-
1925	MAY 2	-	-	A	A	A	A*	AT	T	A	AT	AT	T	A	T*	TA	A	A	A	TA	T*	A	A*	AT	AT	T	T	T	T	T	T	T	T	T	TA	T*	T	T	T	T	T	T	T	T	T	TA	-	T	T	TA	T*	T	T	A	-	-	-
1926	MAY 29	T	T	A	A	A	*	-	A	A	T	A	A	A	A	A	*	A	TA	A	A	A	A	A	T	T	T	T	TA	TA	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	A	T	T	A	T	-	T
1927	JUN 25	TA	TA	A	A	-	A	-	A	A	T	A*	A															

T = towards the sun
A = away from the sun
* = effect doubtful or not discernable
- = missing data

The table shows daily inferences of the polarity of the interplanetary magnetic field made from magnetograms produced by magnetometers at the Vostok Antarctic Station of the USSR for the first half of the day and the Thule Geopole Station of the U.S. Air Weather Service for the second half.

MAY 1974 DATA

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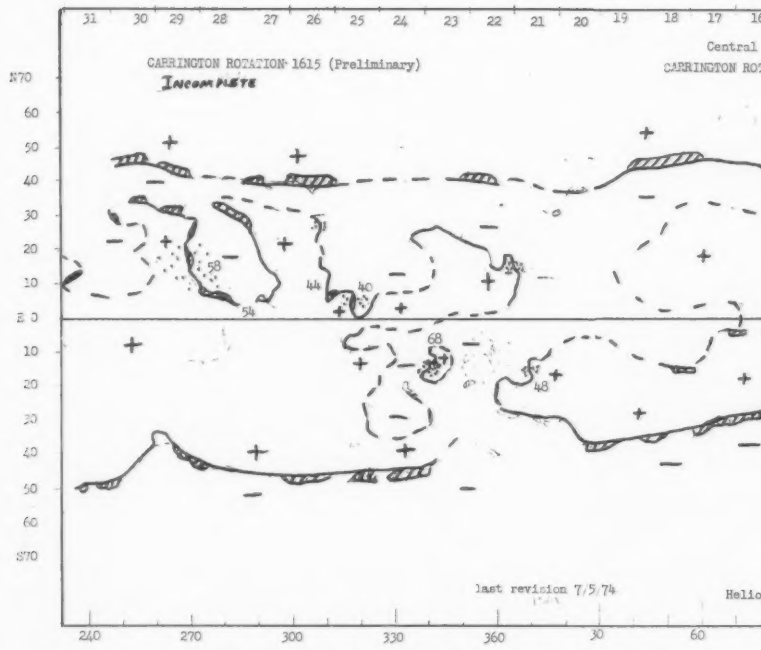
For explanations of the data contained herein see *Descriptive Text* published as supplement to February 1974 *Solar-Geophysical Data* (Number 354).

Hα SYNOP

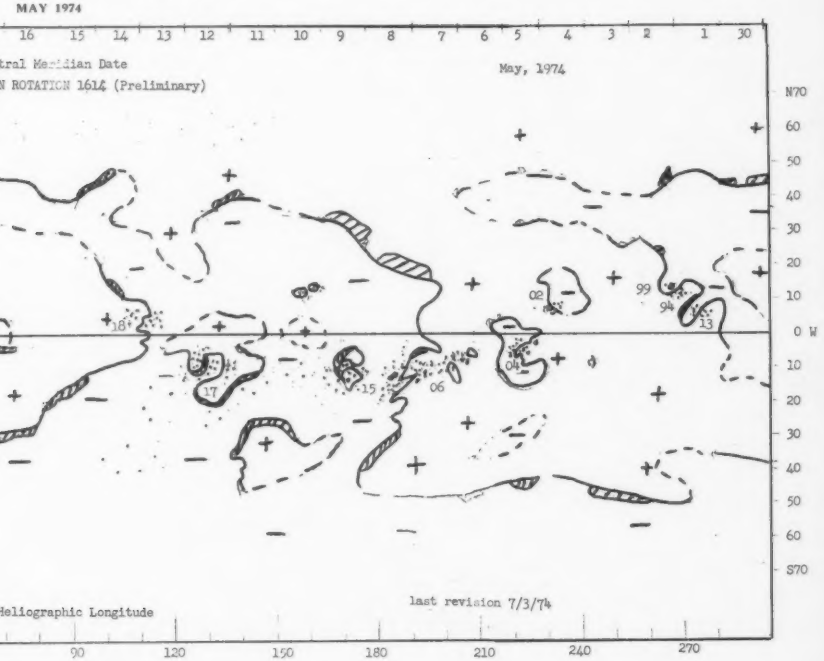
M



Errata: The longitudes on the synoptic charts have been labeled "Carrington longitude". These lo
the heliographic system. This change should also be noted on page 20 of the *Descriptive*
including the reference to Lo, as shown on the pages of solar maps which follow.

OPTIC CHART

MAY 1974



se longitudes are, in fact, in
tive Text published February 1974

MAY 1, 1974 (P=

NASA GSFC
OSO - 7

X-RAY
8-16A

McMATH-H

1917UT
COUNT = 6378
ROLL = 98.3°
P-TH = -6.00

Counts per 0.125 sec.

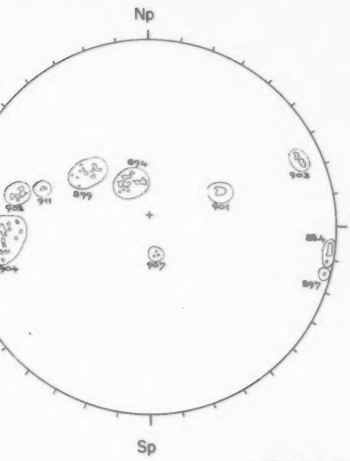
1215UT

Note: The Prospect Hill Observatory has ceased operation on 8.6 mm. A replacement map at this frequency is expected.

(P=-24.25, B_o=-4.17, L_o=282.08)

22 May 74

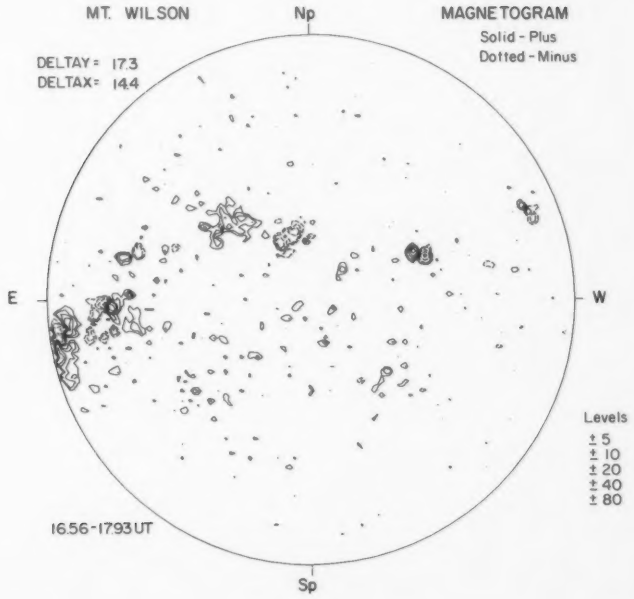
H-HULBERT CALCIUM REPORT

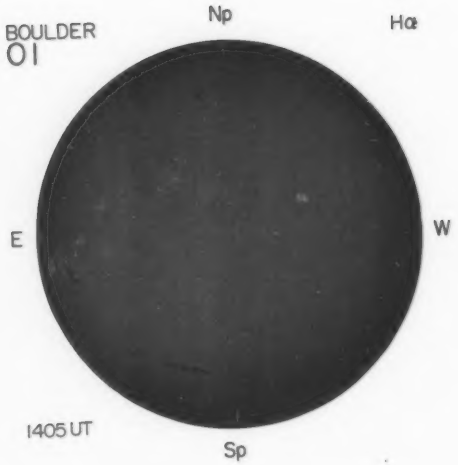


FAIR	S
84-0900	-2.5
01-0500	-3.5
03-0400	-2.5
06-3400	-3.5

MT. WILSON MAGNETOGRAM

Solid - Plus
Dotted - Minus




BOULDER
01
Np
Hα
E
W
Sp
1405 UT
BOULDER
E
904
906
906
1430 UT

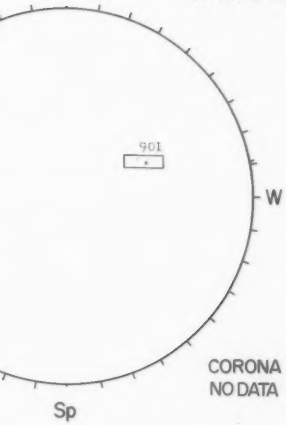
Np

SUNSPOTS

NRL
OSO-7

Np

WHITE - LIGHT
CORONA



E

NO DATA

W

Sp

23
May 74

MAY 2, 1974 (P=

NASA GSFC
OSO - 7

X-RAY
8-16A

McMATH-H

Np

E

NO DATA

W

E

1200 UT

COUNT =
ROLL =
P-TH =

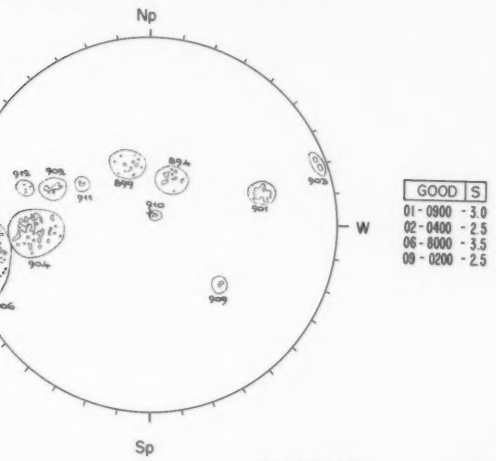
Sp

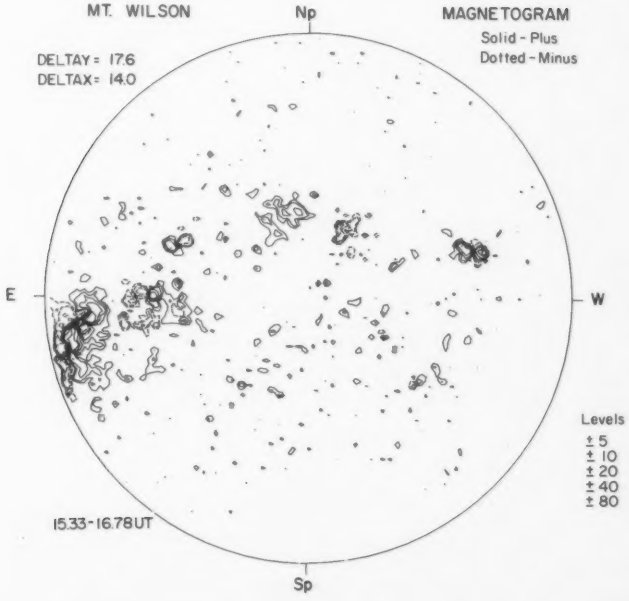
Counts per 0.125 sec.

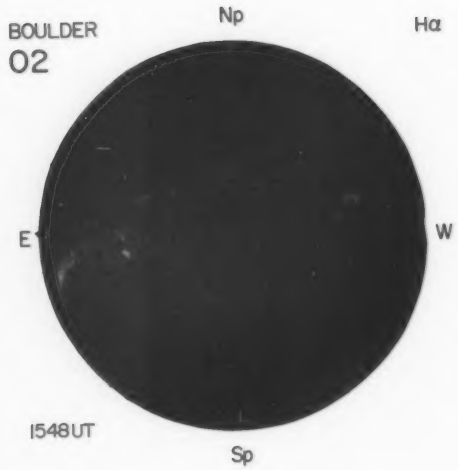
(P=-24.07, B_o=-4.07, L_o=268.86)

24 May 74

H-HULBERT CALCIUM REPORT



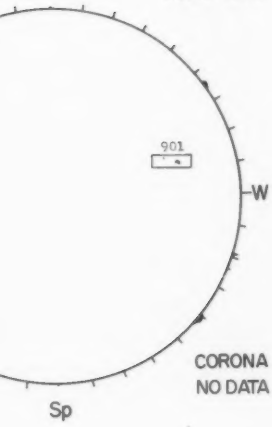



BOULDER
02
Np
Hα
E
W
Sp
1548UT
BOULDER
902
906
E
906
904
906
1600UT

Np

SUNSPOTS

NRL
OSO-7



CORONA
NO DATA

Sp

E

Np

WHITE-LIGHT
CORONA

NO DATA

W

Sp

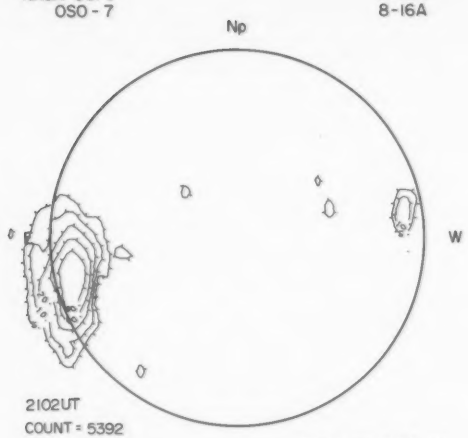
25
May 74

MAY 3, 1974 (P=-23

NASA GSFC
OSO-7

X-RAY
8-16A

McMATH-HULBE



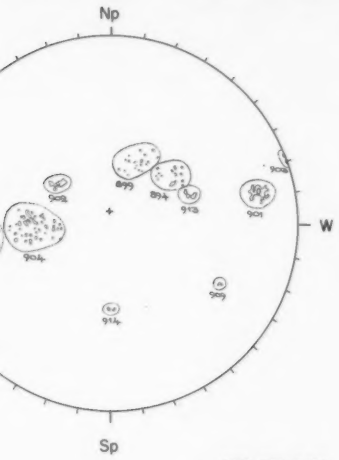
2102UT
COUNT = 5392
ROLL = 98.0°
P-TH = -6.13

Counts per 0.125 sec.

1430UT

-23.89, B_o = -3.96, L_o = 255.64)

ULBERT CALCIUM REPORT

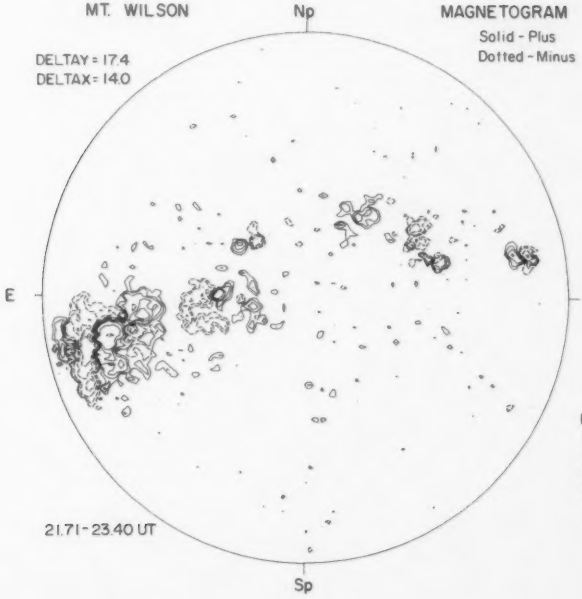


FAIR	M
01 - 0800	- 2.5
02 - 0400	- 2.5
06 - 9000	- 3.5
13 - 0300	- 2.5

MT. WILSON MAGNETOGRAM

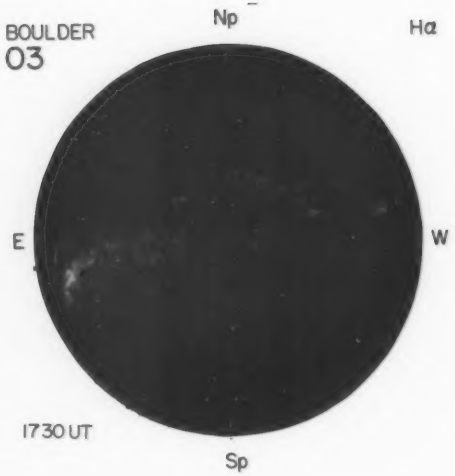
Solid - Plus
Dotted - Minus

DELTAY = 17.4
DELTAX = 14.0



Levels
± 5
± 10
± 20
± 40
± 80

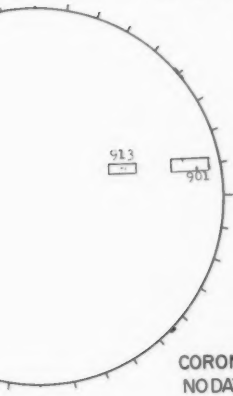
21.71 - 23.40 UT


BOULDER
03
Np
Hα
E
W
1730 UT
Sp
BOULDER
E
906
906
906
904
915
1815 UT

Np

SUNSPOTS

NRL
OSO-7



CORONA
NO DATA

Sp

E

Np

WHITE - LIGHT
CORONA

NO DATA

W

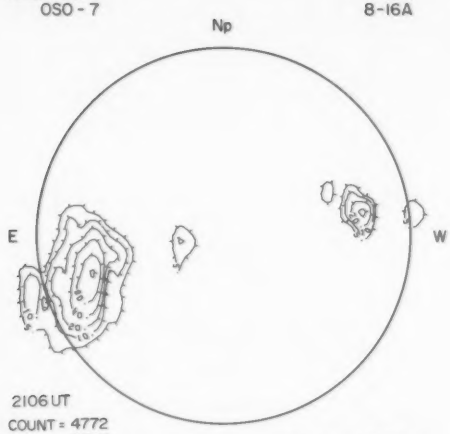
Sp

27
May 74

MAY 4, 1974 (P=

NASA GSFC
OSO - 7

X-RAY
8-16A



2106 UT
COUNT = 4772
ROLL = 97.6°
P-TH = -6.20

Counts per 0.125 sec.

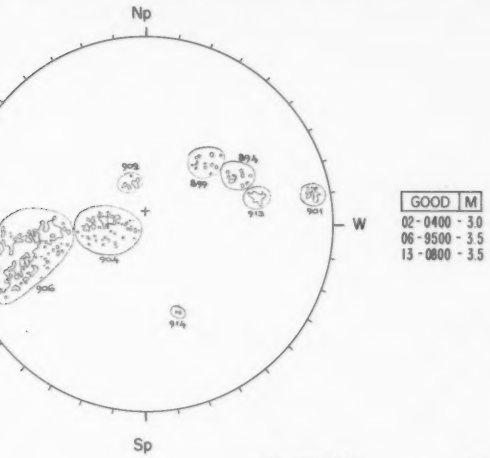
McMATH-H

1200 UT

(P=-23.69, B_o=-3.86, L_o=242.42)

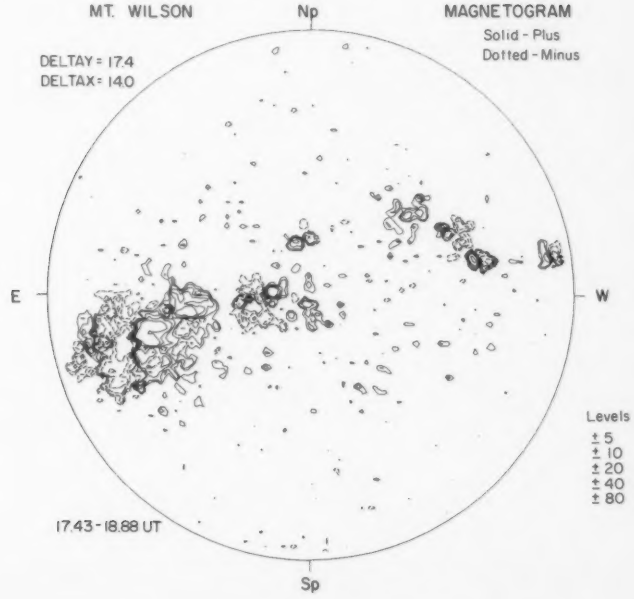
28 May 74

H-HULBERT CALCIUM REPORT



GOOD	M
02 - 0400	3.0
06 - 9500	3.5
13 - 0800	3.5

MT. WILSON



BOULDER
04

Np

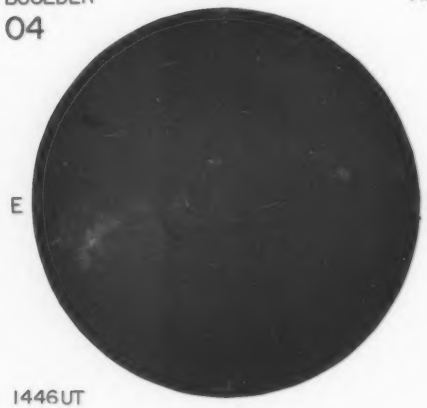
Hα

E

W

Sp

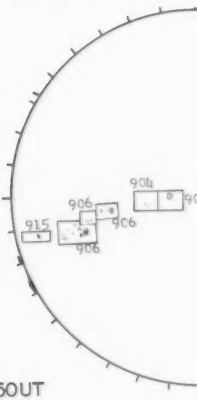
1446UT



BOULDER

N

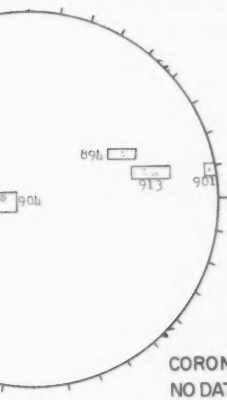
E



1550UT

Np

SUNSPOTS



CORONA
NO DATA

Sp

NRL
OSO-7

W E

Np

WHITE-LIGHT
CORON

NO DATA

W

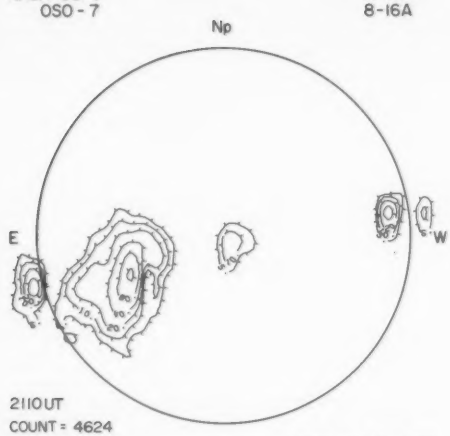
Sp

29
May 74

MAY 5, 1974 (P=-2

NASA GSFC
OSO - 7

X-RAY
8-16A



2110UT
COUNT = 4624
ROLL = 97.2°
P-TH = -6.26

Counts per 0.125 sec.

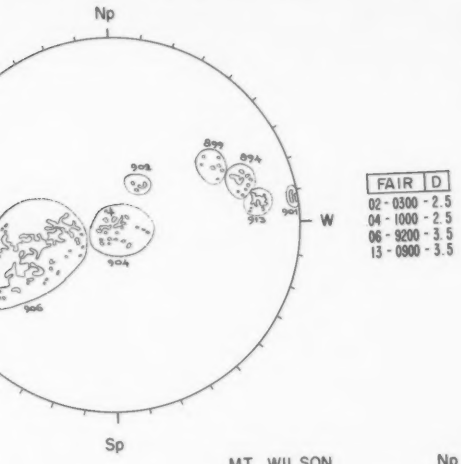
McMATH-HULB

1315UT

-23.49, B_o = -3.76, L_o = 229.20)

30 May 74

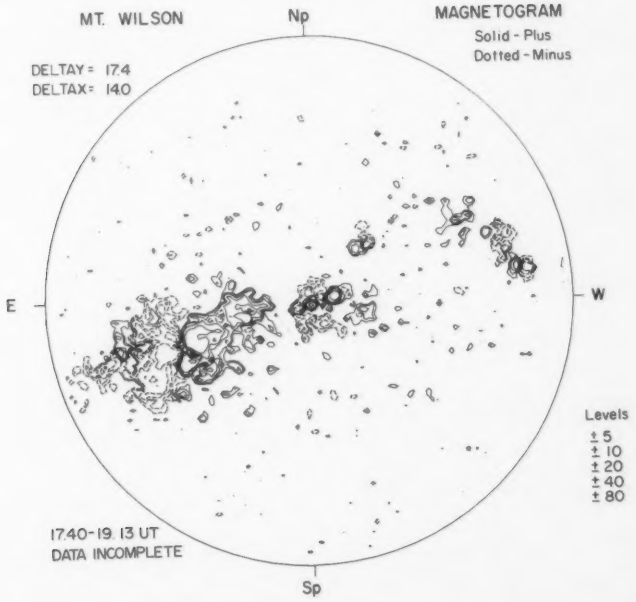
ULBERT CALCIUM REPORT



FAIR	D
02 - 0300	- 2.5
04 - 1000	- 2.5
06 - 9200	- 3.5
13 - 0900	- 3.5

MT. WILSON

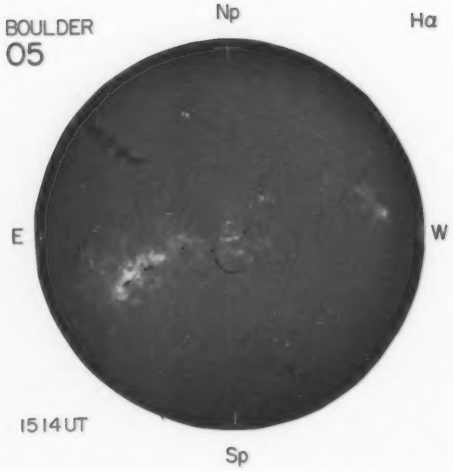
DELTAY = 17.4
DELTAX = 14.0

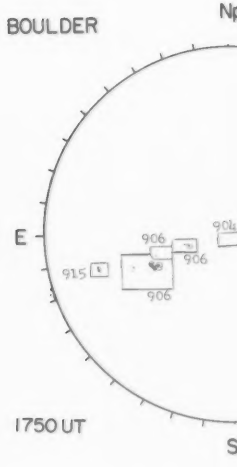


MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80

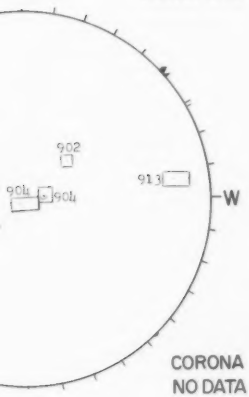
17.40 - 19.13 UT
DATA INCOMPLETE


BOULDER
05
Np
Hα
E
W
1514 UT
Sp


BOULDER
Np
E
906
906
915
906
1750 UT
S

Np

SUNSPOTS



Sp

NRL
OSO-7

Np

WHITE-LIGHT
CORONA

NO DATA

W

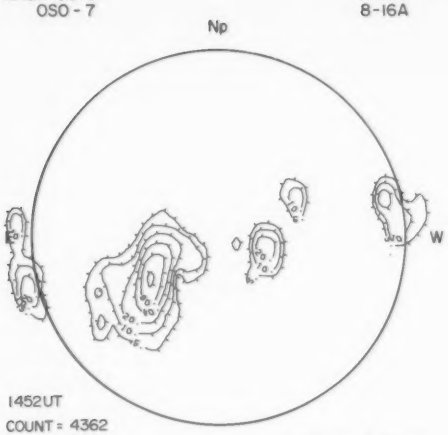
Sp

31
May 74

MAY 6, 1974 (P=-2

NASA GSFC
OSO - 7

X-RAY
8-16A



1452UT
COUNT = 4362
ROLL = 97.3°
P-TH = -6.31

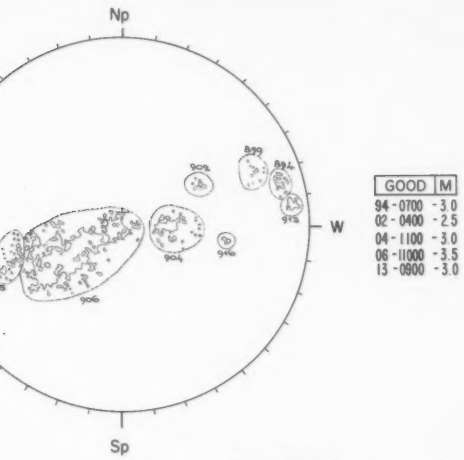
Counts per 0.125 sec.

McMATH-HULB

1630UT

=-23.29, B_o=-3.65, L_o=215.98)

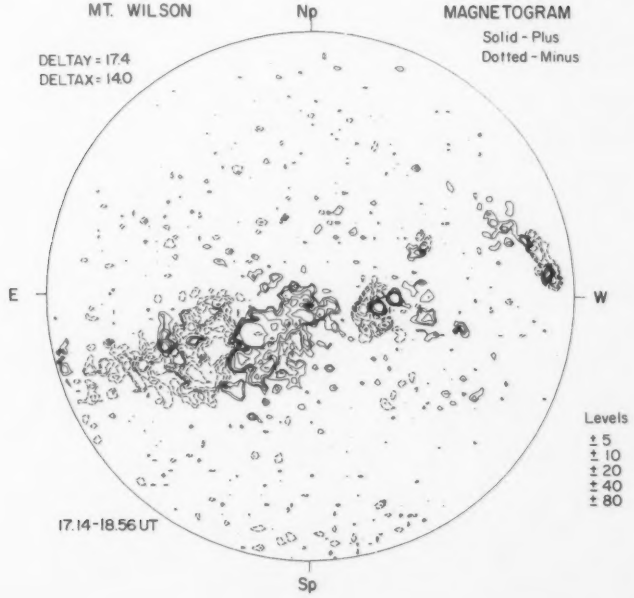
HULBERT CALCIUM REPORT



GOOD	M
94 - 0700	- 3.0
02 - 0400	- 2.5
04 - 1100	- 3.0
06 - 11000	- 3.5
13 - 0900	- 3.0

MT. WILSON MAGNETOGRAM

Solid - Plus
Dotted - Minus



BOULDER
06

Np

Hα

E

W

Sp

1514 UT

BOULDER

E

915

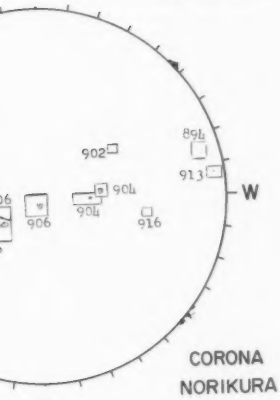
906

906

1600 UT

Np

SUNSPOTS



CORONA
NORIKURA

Sp

NRL
OSO-7

E

Np

WHITE-LIGHT
CORONA

NO DATA

W

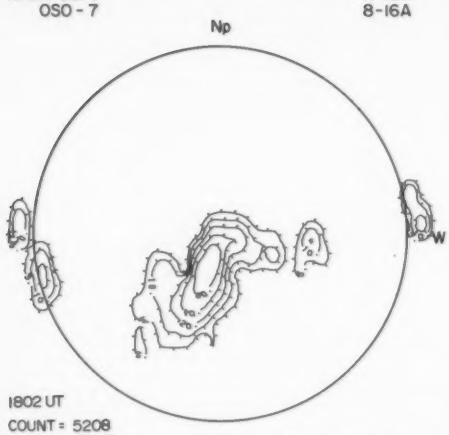
Sp

33
May 74

MAY 7, 1974 (P=-

NASA GSFC
OSO-7

X-RAY
8-16A



1802 UT
COUNT = 5208
ROLL = 97.4°
P-TH = -6.37

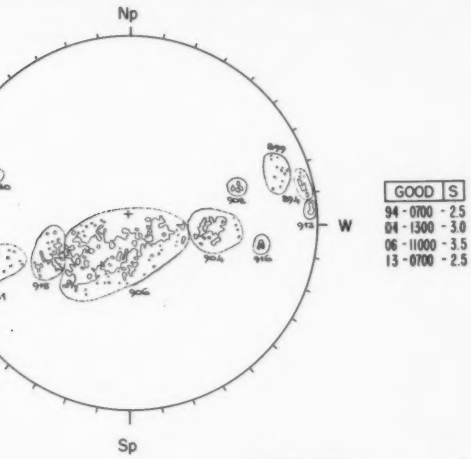
Counts per 0.125 sec.

McMATH-HUL

1145UT

P=-23.07, B_o=-3.55, L_o=202.76)

-HULBERT CALCIUM REPORT

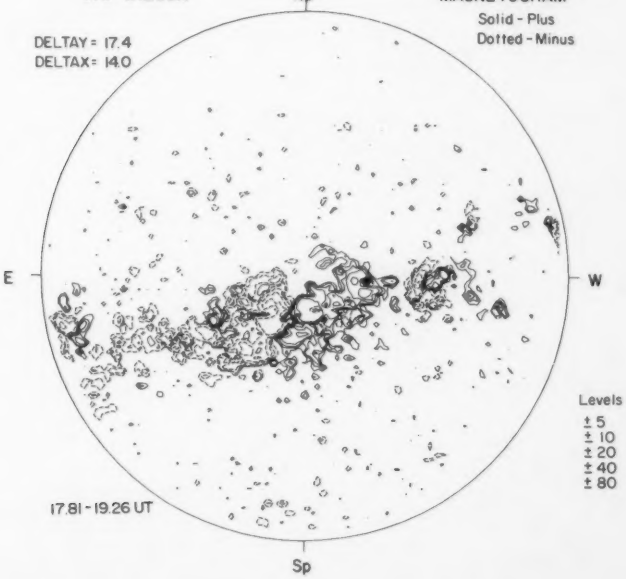


GOOD	S
94 - 0700	- 2.5
04 - 1300	- 3.0
06 - 11000	- 3.5
13 - 0700	- 2.5

MT. WILSON MAGNETOGRAM

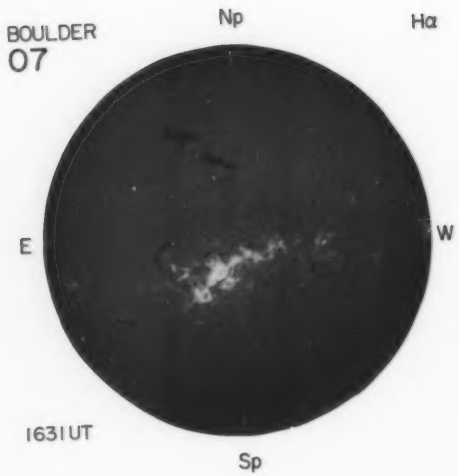
Solid - Plus
Dotted - Minus

DELTAY = 17.4
DELTAX = 14.0



Levels
±5
±10
±20
±40
±80

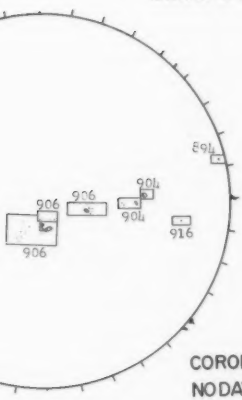
17.81 - 19.26 UT


BOULDER
07
Np
Hα
E
W
1631 UT
Sp
BOULDER
E
915
1730 UT

Np

SUNSPOTS

NRL
OSO-7



CORONA
NO DATA

Sp

Np

WHITE-LIGHT
CORONA

NO DATA

W

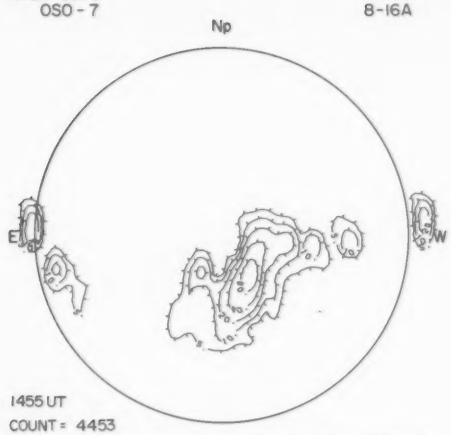
Sp

35
May 74

MAY 8, 1974 (P=-2

NASA GSFC
OSO - 7

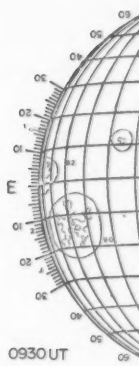
X-RAY
8-16A



1455 UT
COUNT = 4453
ROLL = 97.7°
P-TH = -6.42

Counts per 0.125 sec.

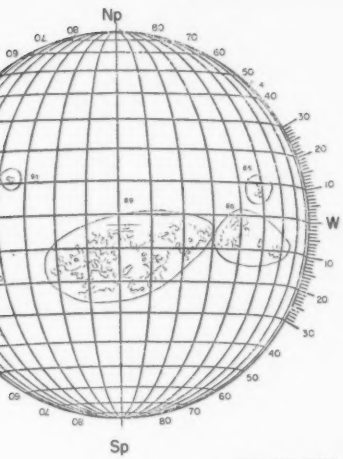
CATANIA



0930 UT

-22.85, B_o=-3.44, L_o=189.54)

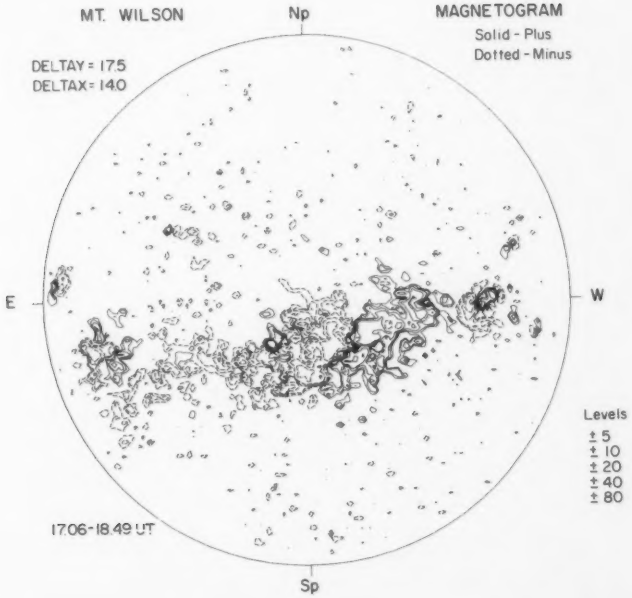
CALCIUM REPORT



FAIR	GD
86 - 2911	---
89 - 15169	---
92 - 1803	---

MT. WILSON

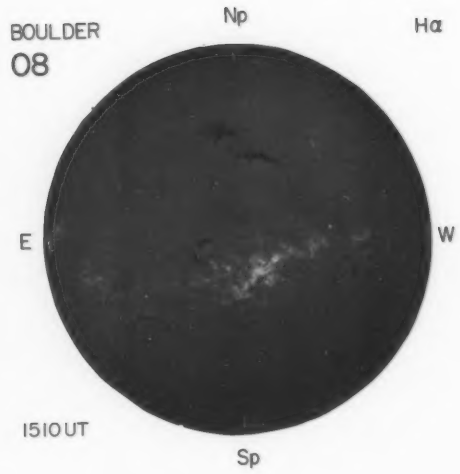
DELTAY = 17.5
DELTAX = 14.0

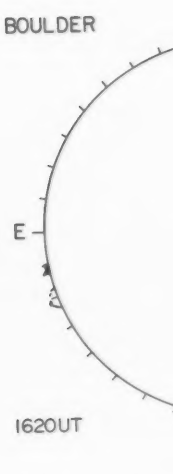


MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80

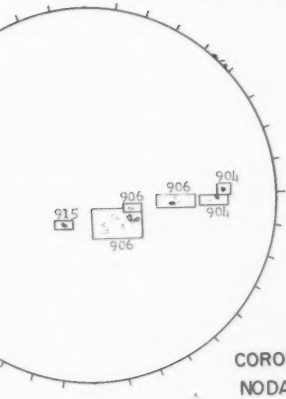
1706-18.49 UT


BOULDER
08
Np
Hα
E
W
Sp
1510 UT


BOULDER
E
1620 UT

Np

SUNSPOTS



CORONA
NODATA

Sp

NRL
OSO-7

Np

WHITE-LIGHT
CORONA

NO DATA

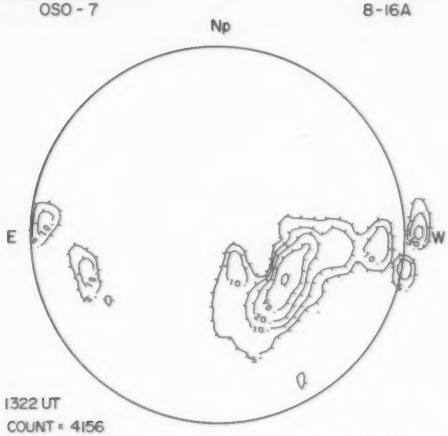
W

Sp

MAY 9, 1974 (P=-

NASA GSFC
OSO - 7

X-RAY
8-16A



1322 UT
COUNT = 4156
ROLL = 98.7°
P-TH = -6.48

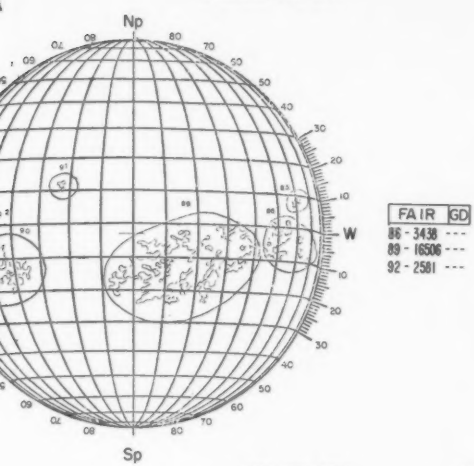
Counts per 0.125 sec.

CATANIA

0737 UT

P=-22.62, B_o=-3.33, L_o=176.32)

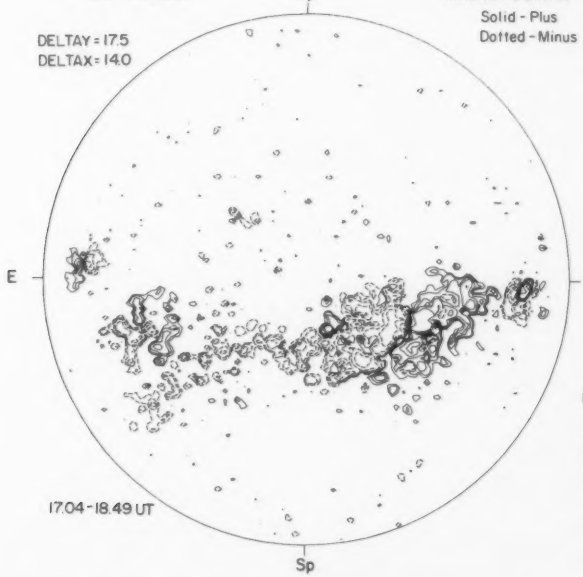
CALCIUM REPORT



FAIR	GD
86 - 3438	---
89 - 16506	---
92 - 2581	---

MT. WILSON

DELTAY = 17.5
DELTAX = 14.0

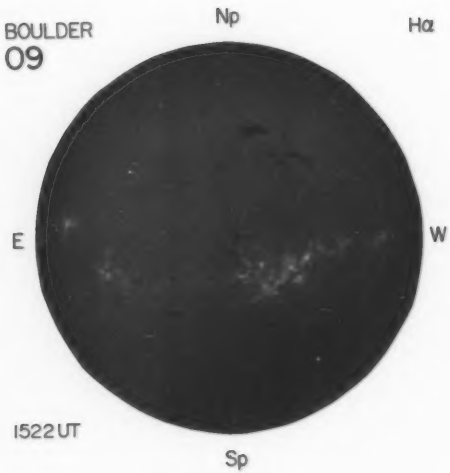


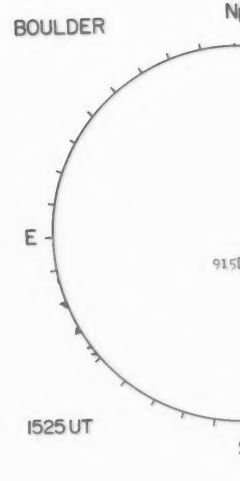
MAGNETOGRAM

Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80

17.04 - 18.49 UT

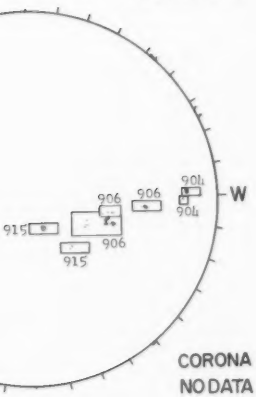

BOULDER
09
Np
Hα
E
W
1522 UT
Sp


BOULDER
E
1525 UT

Np

SUNSPOTS

NRL
OSO-7



CORONA
NO DATA

Sp

E

Np

WHITE - LIGHT
CORONA

NO DATA

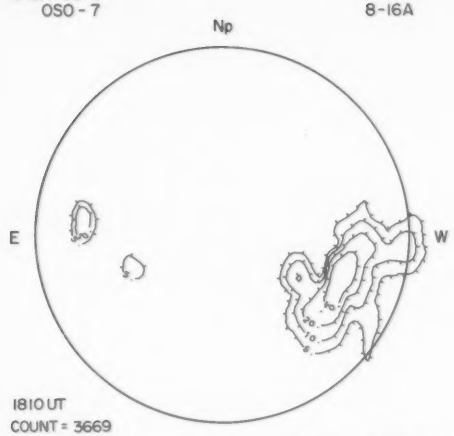
W

Sp

39
May 74

NASA GSFC
OSO - 7

X-RAY
8-16A



1810 UT
COUNT = 3669
ROLL = 99.8°
P-TH = -6.54

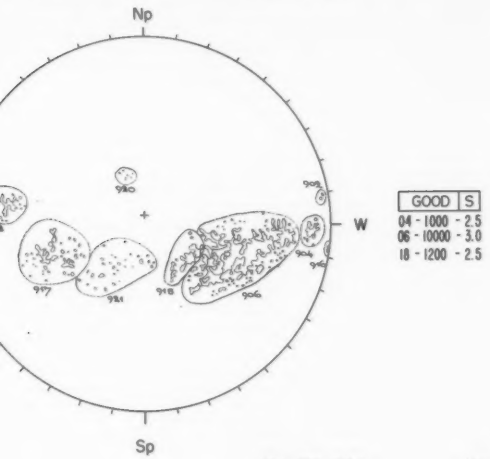
Counts per 0.125 sec.

McMATH-H

1145 UT

P=-22.39, B_o=-3.22, L_o=163.10)

H-HULBERT CALCIUM REPORT



GOOD	S
04 - 1000	- 2.5
06 - 10000	- 3.0
18 - 1200	- 2.5

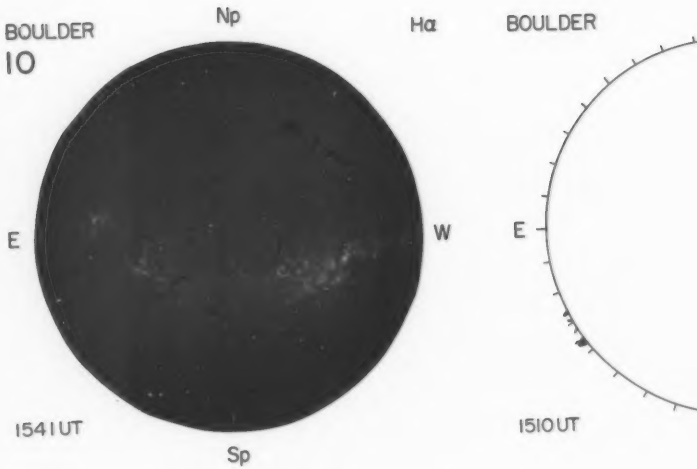
MT. WILSON Np MAGNETOGRAM

Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

Levels
± 5
± 10
± 20
± 40
± 80

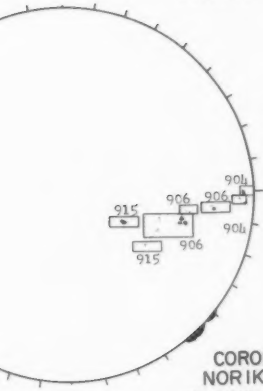
Sp


BOULDER
10
Np
Hα
E
W
Sp
1541 UT
BOULDER
E
1510 UT

Np

SUNSPOTS

NRL
OSO-7



CORONA
NORIKURA
NO DATA W/LIMB

Sp

Np

WHITE-LIGHT
CORONA

NO DATA

W

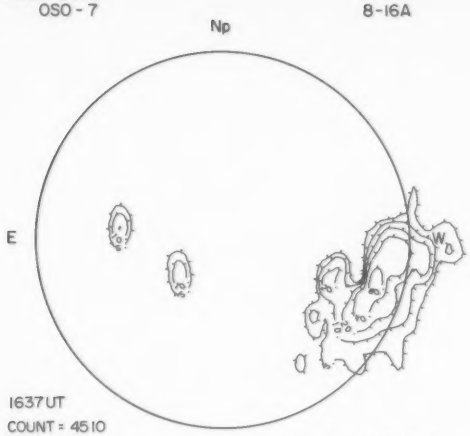
Sp

41
May 74

MAY 11, 1974 (P=-

NASA GSFC
OSO-7

X-RAY
8-16A



1637UT
COUNT = 4510
ROLL = 98.4°
P-TH = -6.59

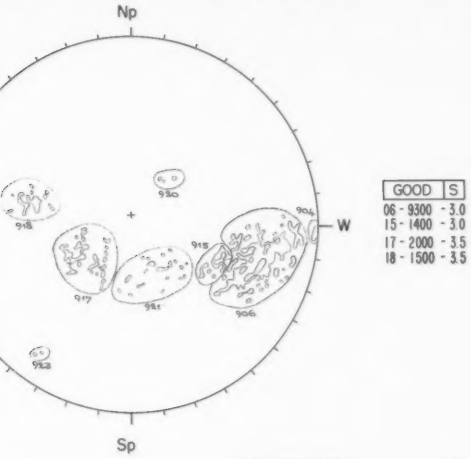
Counts per 0.125 sec.

McMATH-HUL

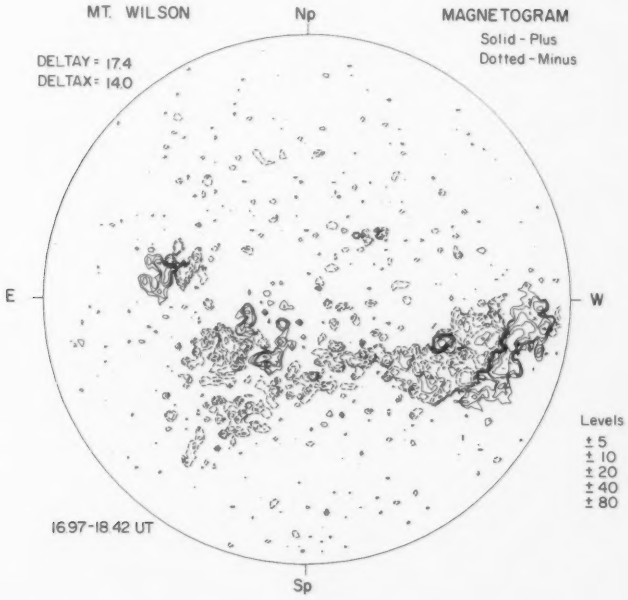
1240UT

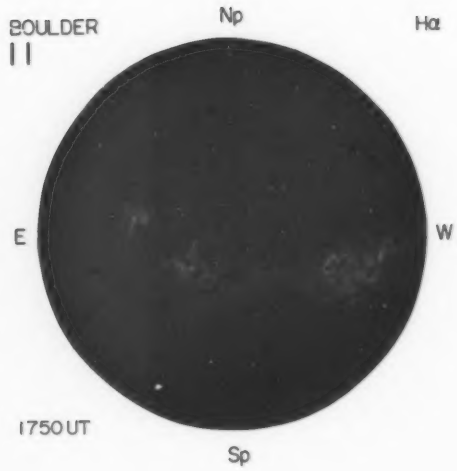
P=-22.15, B_o=-3.11, L_o=149.87)

-HULBERT CALCIUM REPORT



GOOD	S
06 - 9300	- 3.0
15 - 1400	- 3.0
17 - 2000	- 3.5
18 - 1500	- 3.5

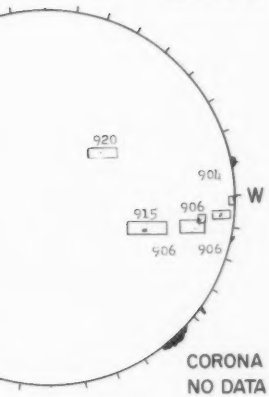



BOULDER
Np
Hα
E
W
1750 UT
Sp
BOULDER
E
1545 UT

Np

SUNSPOTS

NRL
OSO-7



CORONA
NO DATA

Sp

Np

WHITE-LIGHT
CORONA

E

NO DATA

W

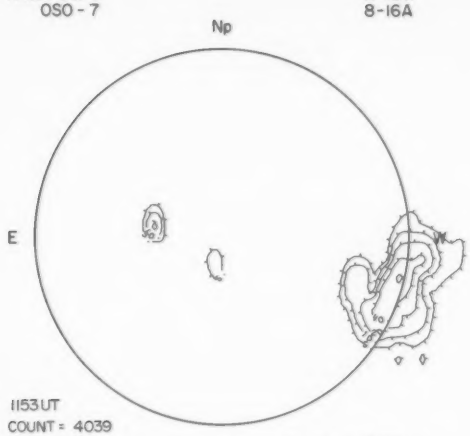
Sp

43
May 74

MAY 12, 1974 (P=-

NASA GSFC
OSO - 7

X-RAY
8-16A



1153 UT
COUNT = 4039
ROLL = 97.1°
P-TH = -6.63

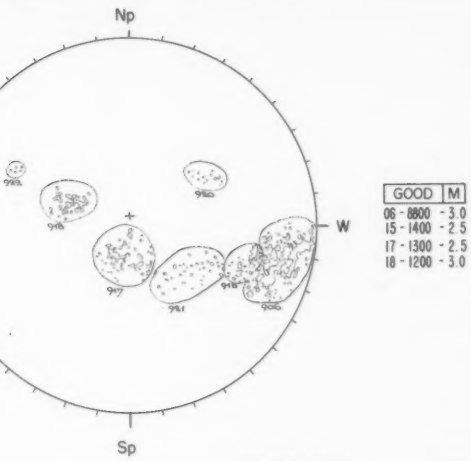
Counts per 0.125 sec.

McMATH-HUL

1450 UT

=-21.90, B_o=-3.00, L_o=136.65)

HULBERT CALCIUM REPORT

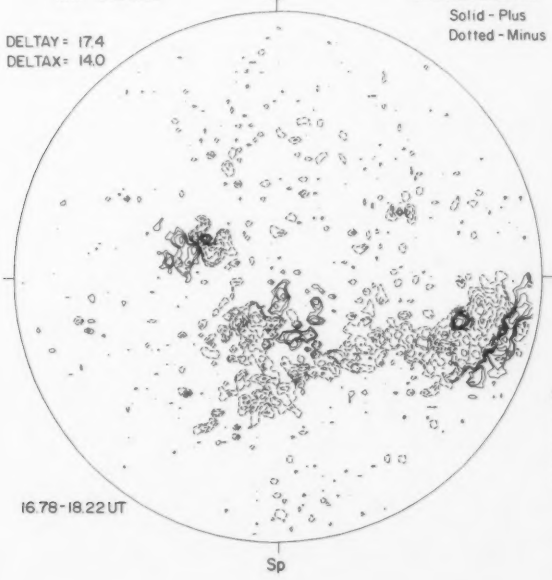


GOOD	M
06 - 8800	- 3.0
15 - 1400	- 2.5
17 - 1300	- 2.5
18 - 1200	- 3.0

MT. WILSON MAGNETOGRAM

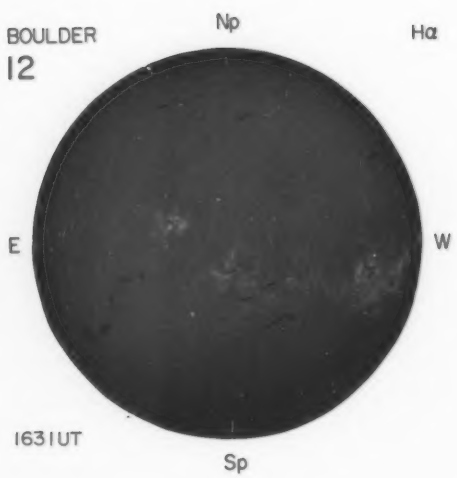
Solid - Plus
Dotted - Minus

DELTAY = 17.4
DELTAX = 14.0



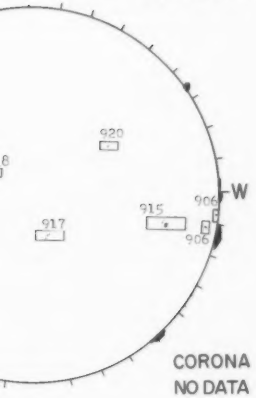
Levels
± 5
± 10
± 20
± 40
± 80

16.78-18.22 UT


BOULDER
12
Np
Hα
E
W
1631 UT
Sp
BOULDER
N
E
1800 UT

Np

SUNSPOTS



CORONA
NO DATA

Sp

NRL
OSO-7

E

Np

WHITE-LIGHT
CORONA

NO DATA

W

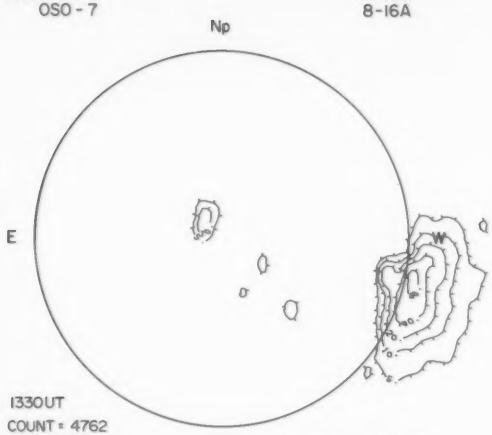
Sp

45
May 74

MAY 13, 1974 (P=-2

NASA GSFC
OSO - 7

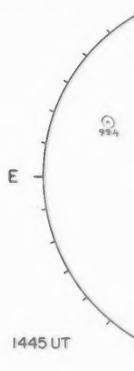
X-RAY
8-16A



1330UT
COUNT = 4762
ROLL = 95.5°
P-TH = -6.68

Counts per 0.125 sec.

McMATH-HUL

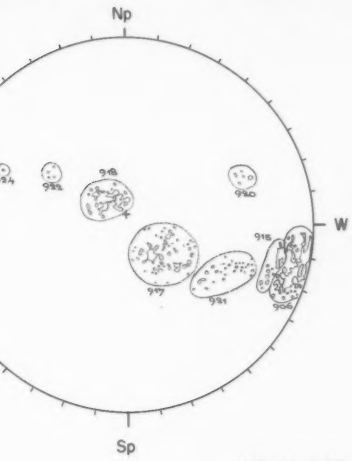


1445 UT

=-21.64, B_o=-2.89, L_o=123.43)

46
May 74

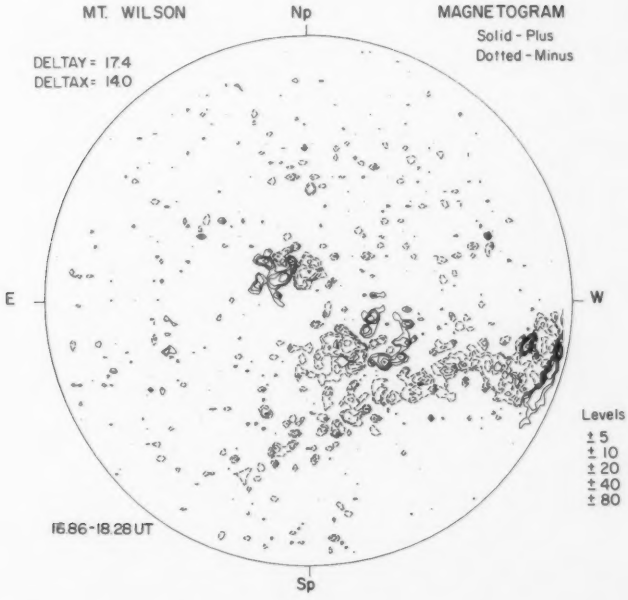
HULBERT CALCIUM REPORT



GOOD	M
08 - 7500 - 3.0	
15 - 1300 - 2.5	
17 - 1200 - 2.5	
18 - 1200 - 3.0	

MT. WILSON

DELTAY= 17.4
DELTAX= 14.0



MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80

16.86-18.28 UT

BOULDER
13

Np

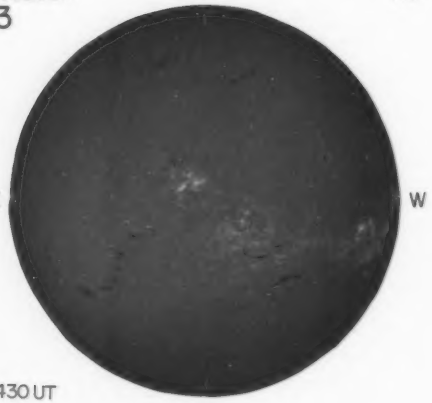
Hα

E

W

Sp

1430 UT



BOULDER

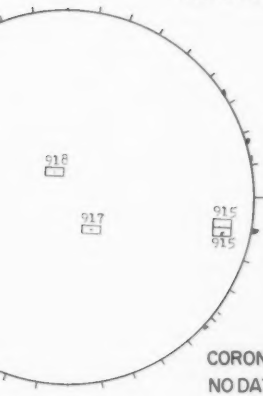
E

1645 UT

Np

SUNSPOTS

NRL
OSO-7



CORONA
NO DATA

Sp

E

NO DATA

Np

WHITE-LIGHT
CORONA

W

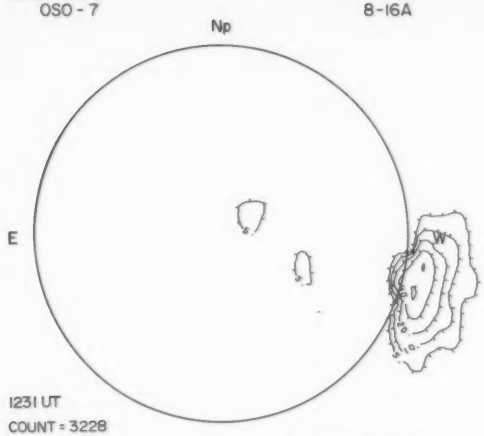
Sp

47
May 74

MAY 14, 1974 (P=-2

NASA GSFC
OSO - 7

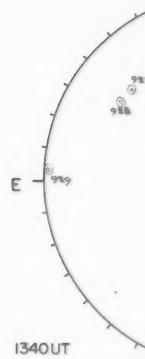
X-RAY
8-16A



1231 UT
COUNT = 3228
ROLL = 94.3°
P-TH = -6.72

Counts per 0.125 sec.

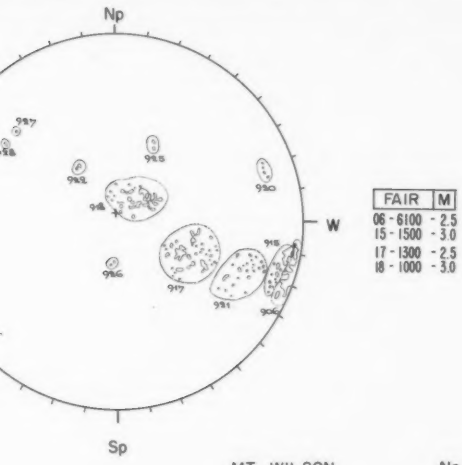
McMATH-HULB



1340UT

=-21.38, B_o=-2.78, L_o=110.20)

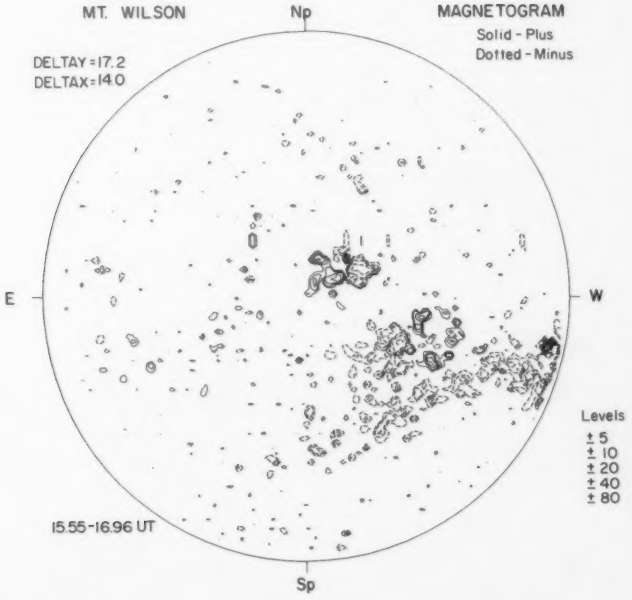
ULBERT CALCIUM REPORT



FAIR	M
06 - 6100	- 2.5
15 - 1500	- 3.0
17 - 1300	- 2.5
18 - 1000	- 3.0

MT. WILSON

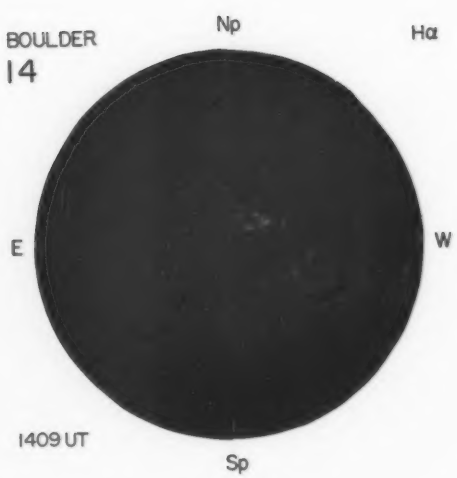
DELTAY=17.2
DELTAX=14.0



MAGNETOGRAM
Solid - Plus
Dotted - Minus

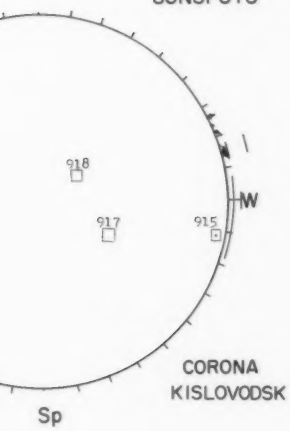
Levels
± 5
± 10
± 20
± 40
± 80

15.55-16.96 UT


BOULDER
14
Np
Hα
E
W
Sp
1409 UT
BOULDER
E
1645 UT

Np

SUNSPOTS



CORONA
KISLOVODSK

Sp

NRL
OSO-7

W E

NO DATA

Np

WHITE-LIGHT
CORONA

W

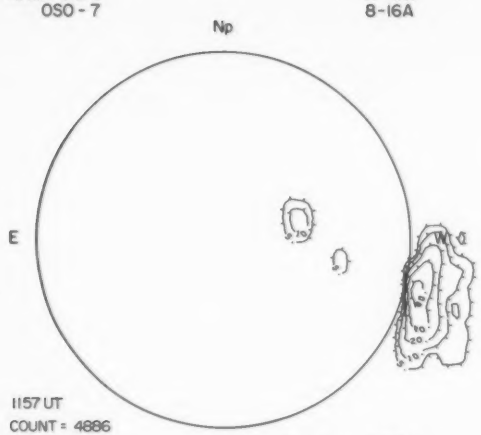
Sp

MAY 15, 1974 (P=-

NASA GSFC
OSO - 7

X-RAY
8-16A

McMATH-HUL



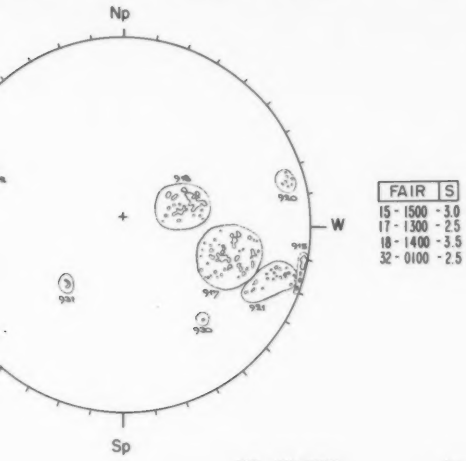
1157 UT
COUNT = 4886
ROLL = 94.7°
P-TH = -6.77

Counts per 0.125 sec.

1205 UT

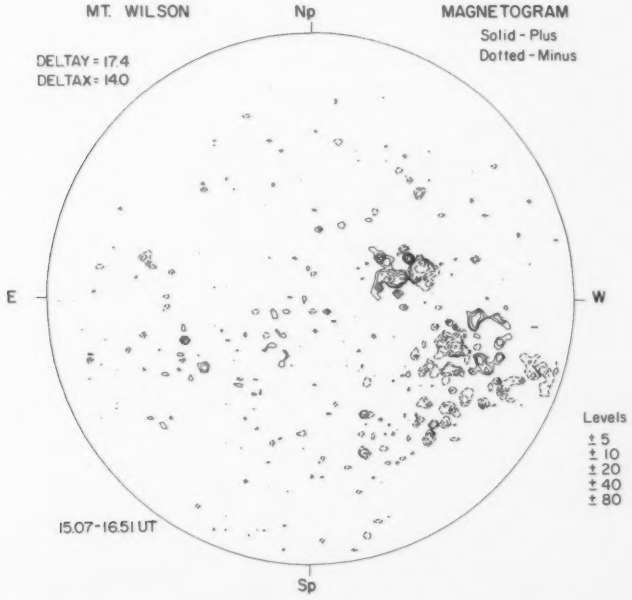
$P=-21.11,\ B_o=-2.66,\ L_o=96.98$)

HULBERT CALCIUM REPORT



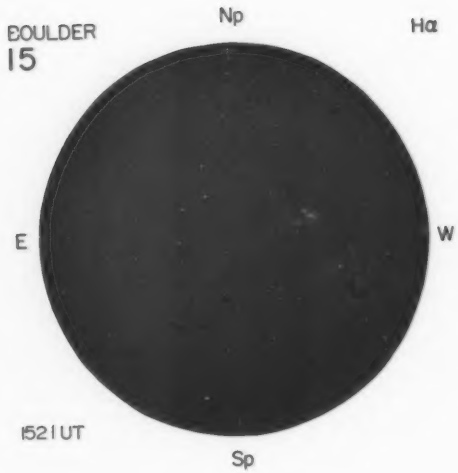
FAIR	S
15 - 1500	- 3.0
17 - 1300	- 2.5
18 - 1400	- 3.5
32 - 0100	- 2.5

MT. WILSON



MAGNETOGRAM
Solid - Plus
Dotted - Minus

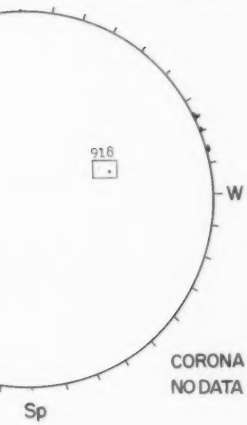
Levels
± 5
± 10
± 20
± 40
± 80


BOULDER
15
Np
Hα
E
W
1521 UT
Sp
BOULDER
E
1700 UT

Np

SUNSPOTS

NRL
OSO-7



Sp

Np

WHITE-LIGHT
CORONA

NO DATA

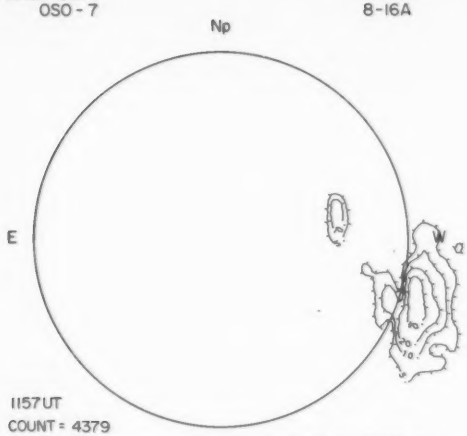
W

Sp

MAY 16, 1974 (P=-

NASA GSFC
OSO - 7

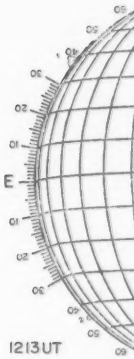
X-RAY
8-16A



1157UT
COUNT = 4379
ROLL = 93.8°
P-TH = -6.81

Counts per 0.125 sec.

CATANIA

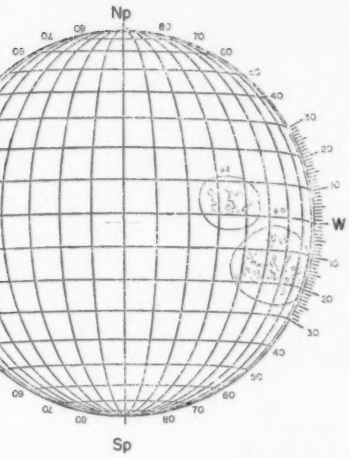


1213UT

=-20.84, B_o =-2.55, L_o = 83.75)

52
May 74

CALCIUM REPORT



	FAIR	GD
90	4660	---
82	2269	---

MT. WILSON Np MAGNETOGRAM

Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

E

NO DATA

W

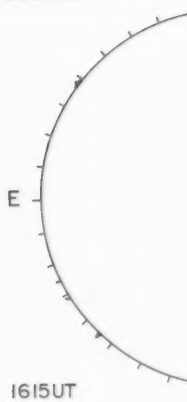
Levels
± 5
± 10
± 20
± 40
± 80

Sp

BOULDER
16

1456 UT

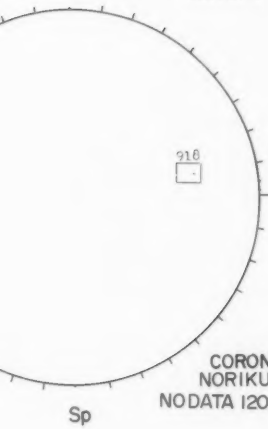
BOULDER



1615 UT

Np

SUNSPOTS



CORONA
NORIKURA
NO DATA 120-360°

Sp

NRL
OSO-7

E

Np

WHITE-LIGHT
CORONA

NO DATA

W

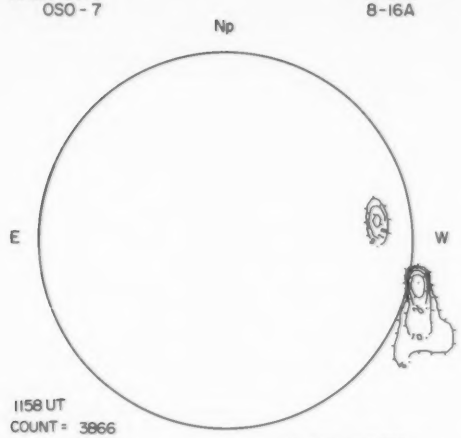
Sp

53
May 74

MAY 17, 1974 (P=

NASA GSFC
OSO - 7

X-RAY
8-16A



1158 UT
COUNT = 3866
ROLL = 93.0°
P-TH = -6.85

Counts per 0.125 sec.

McMATH-HI

1750UT

P=-20.55, B_o=-2.44, L_o=70.52)

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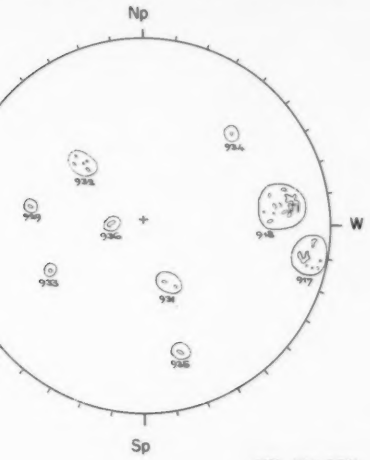
May 74

H-HULBERT CALCIUM REPORT



GOOD	S
17 - 1100	- 2.5
18 - 1400	- 3.5

MT. WILSON Np MAGNETOGRAM

Solid - Plus
Dotted - Minus

DELTAY=
DELTAX=

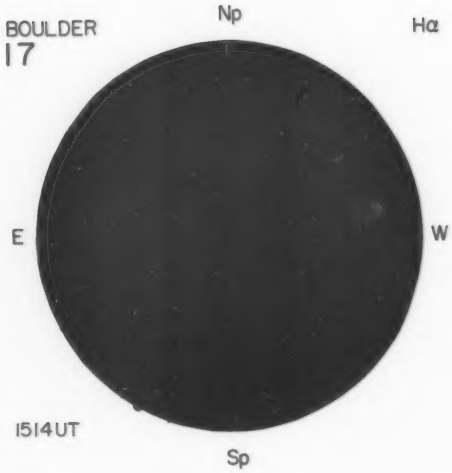
E

NO DATA

W

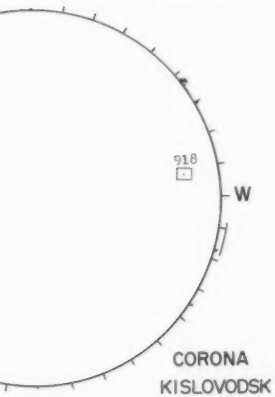
Levels
± 5
± 10
± 20
± 40
± 80

Sp


BOULDER
17
Np
Hα
E
W
1514 UT
Sp
BOULDER
E
1515 UT

Np

SUNSPOTS



CORONA
KISLOVODSK

Sp

NRL
OSO-7

E

Np

NO DATA

Sp

WHITE-LIGHT
CORONA

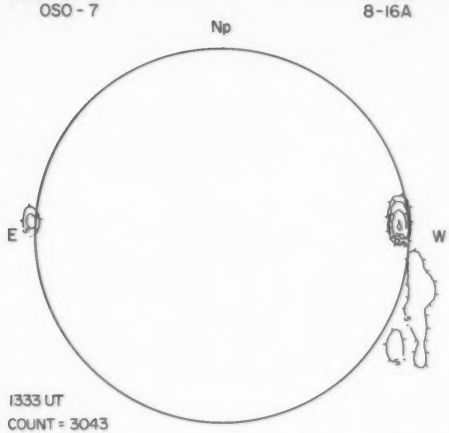
W

55
May 74

MAY 18, 1974 (P=-2

NASA GSFC
OSO - 7

X-RAY
8-16A



1333 UT
COUNT = 3043
ROLL = 92.5°
P-TH = -6.89

Counts per 0.125 sec.

McMATH-HULBE

1245 UT

-20.27, B_o=-2.32, L_o=57.30)

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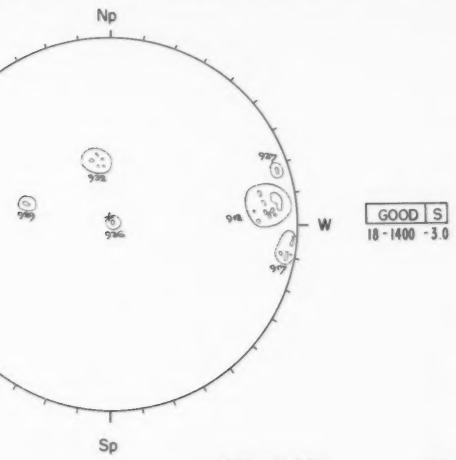
May 74

ULBERT CALCIUM REPORT



GOOD | S
18 - 1400 - 3.0

MT. WILSON Np MAGNETOGRAM

Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

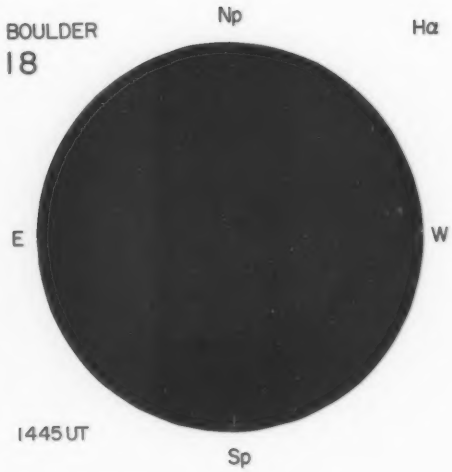
E

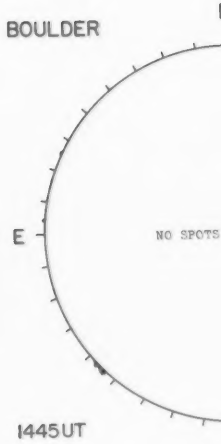
NO DATA

W

Levels
± 5
± 10
± 20
± 40
± 80

Sp

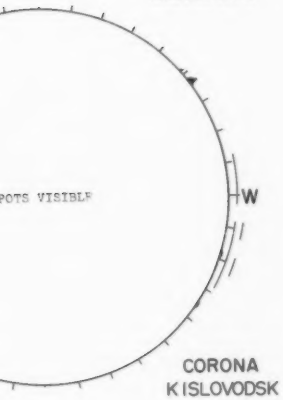

BOULDER
18
Np
Hα
E
W
Sp
1445 UT


BOULDER
E
NO SPOTS
1445 UT

Np

SUNSPOTS

NRL
OSO-7



E

CORONA
KISLOVODSK

Sp

Np

WHITE-LIGHT
CORONA

NO DATA

W

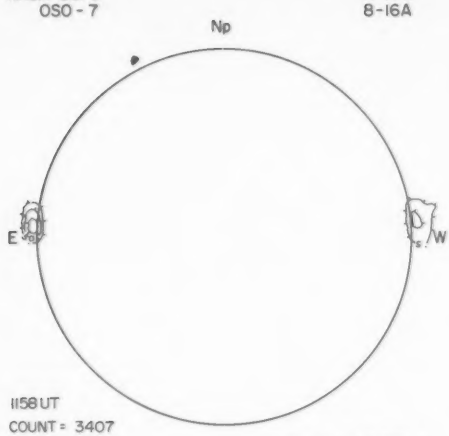
Sp

57
May 74

MAY 19, 1974 (P=-

NASA GSFC
OSO - 7

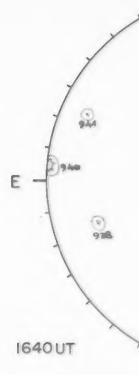
X-RAY
8-16A



1158 UT
COUNT = 3407
ROLL = 92.0°
P-TH = -6.93

Counts per 0.125 sec.

McMATH-HUL

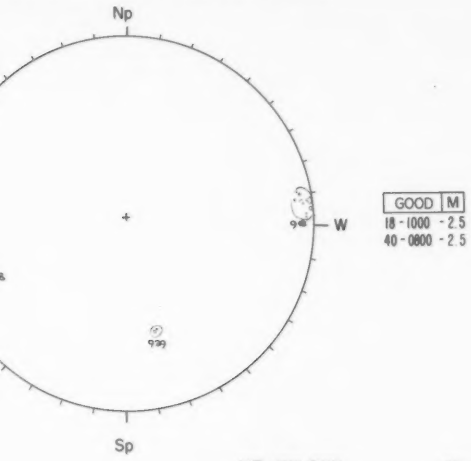


1640 UT

P=-19.97, B_o=-2.21, L_o=44.07)

58
May 74

HULBERT CALCIUM REPORT



GOOD	M
18 - 1000	- 2.5
40 - 0800	- 2.5

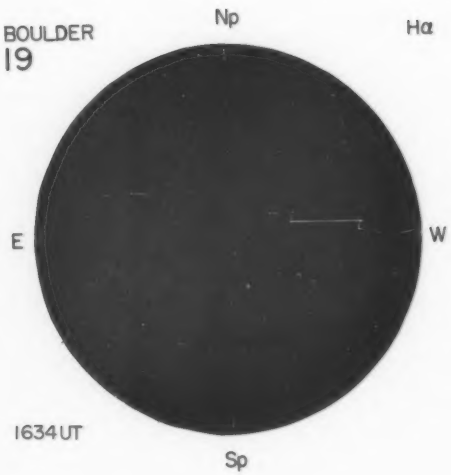
MT. WILSON Np MAGNETOGRAM

Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

Levels
± 5
± 10
± 20
± 40
± 80

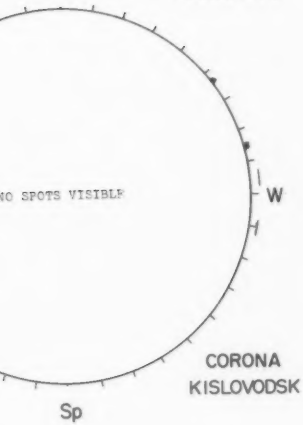
Sp


BOULDER
19
Np
Hα
E
W
Sp
1634 UT
BOULDER
E
1634 UT

Np

SUNSPOTS

NRL
OSO-7



E

CORONA
KISLOVODSK

Sp

Np

WHITE-LIGHT
CORONA

NO DATA

W

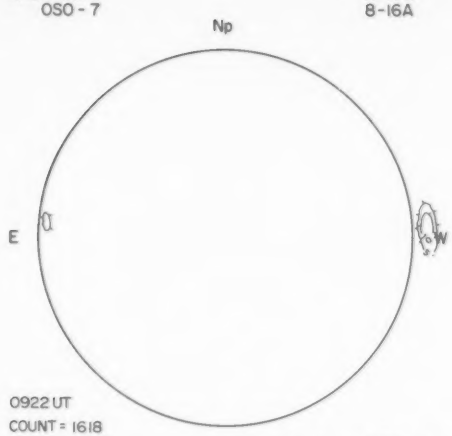
Sp

59
May 74

NASA GSFC
OSO - 7

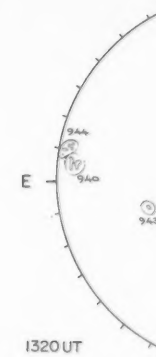
X-RAY
8-16A

McMATH-HULB



0922 UT
COUNT = 1618
ROLL = 92.2°
P-TH = -6.96

Counts per 0.125 sec.

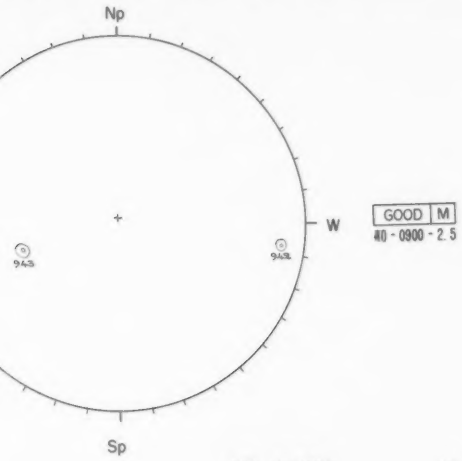


1320 UT

=-19.67, B_o=-2.09, L_o=30.84)

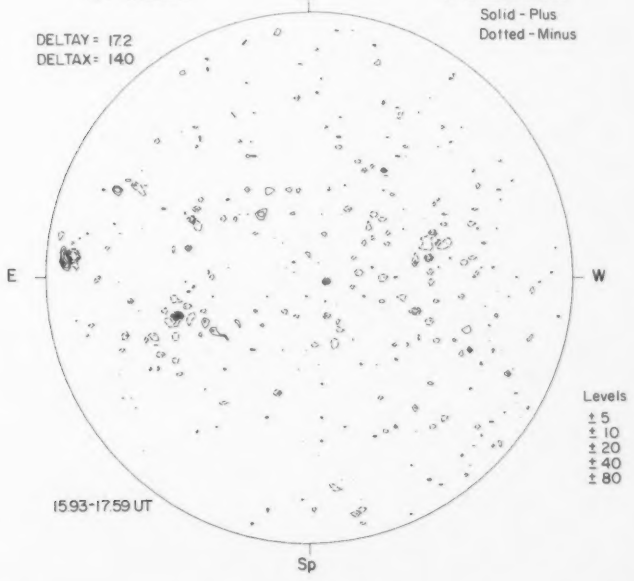
60
May 74

ULBERT CALCIUM REPORT



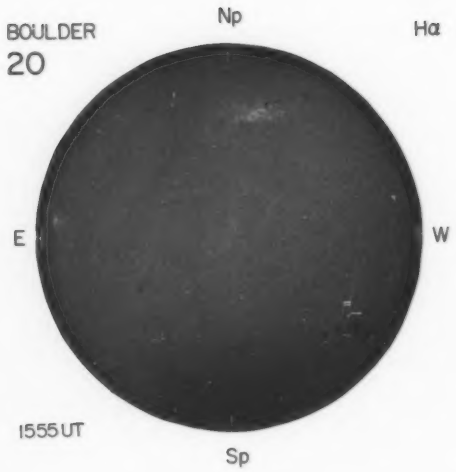
GOOD	M
40 - 0900 - 2.5	

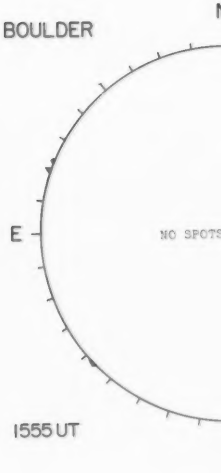
MT. WILSON



MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80

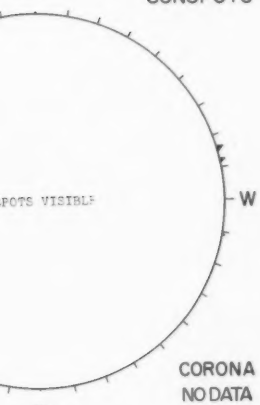

BOULDER
20
Np
Hα
E
W
1555 UT
Sp


BOULDER
E
NO SPOTS
1555 UT

Np

SUNSPOTS

NRL
OSO-7



Sp

Np

WHITE-LIGHT
CORONA

E

NO DATA

W

Sp

61
May 74

MAY 21, 1974 (P=-

NASA GSFC
OSO - 7

X-RAY
8-16A

McMATH-HUL

Np

E

NO DATA

W

E

1150UT

COUNT =
ROLL =
P-TH =

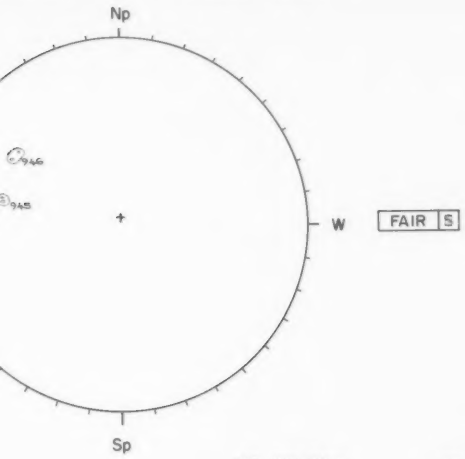
Sp

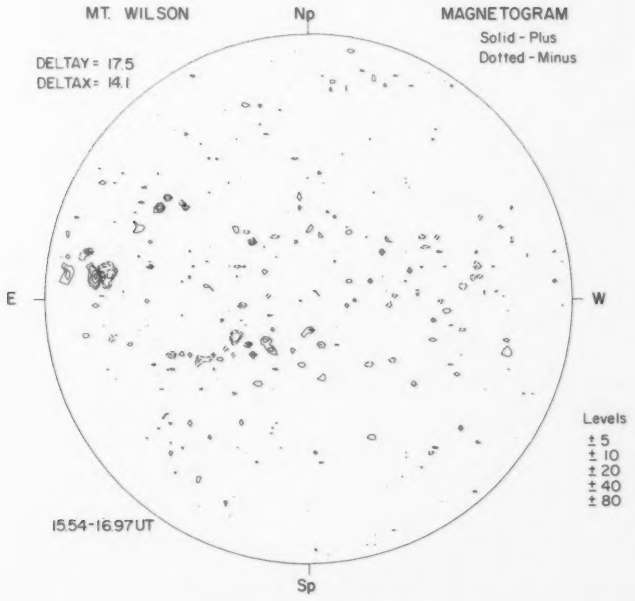
Counts per 0.125 sec.

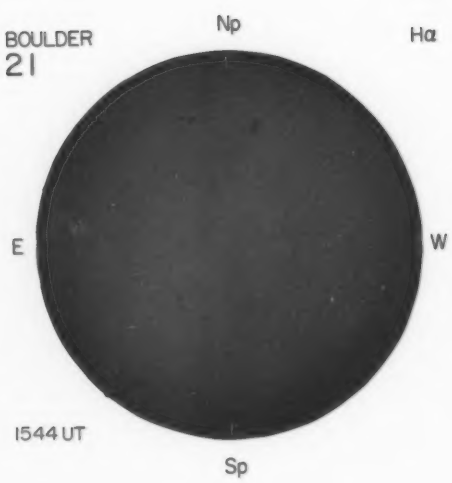
=-19.36, B_o =-1.97, L_o = 17.61)

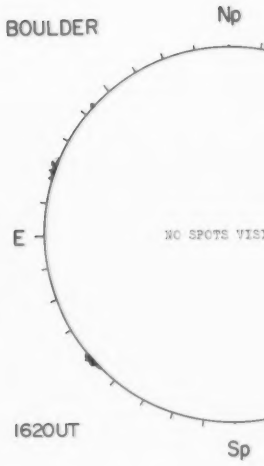
62
May 74

HULBERT CALCIUM REPORT






BOULDER
21
Np
Hα
E
W
1544 UT
Sp


BOULDER
Np
E
NO SPOTS VISI
1620UT
Sp

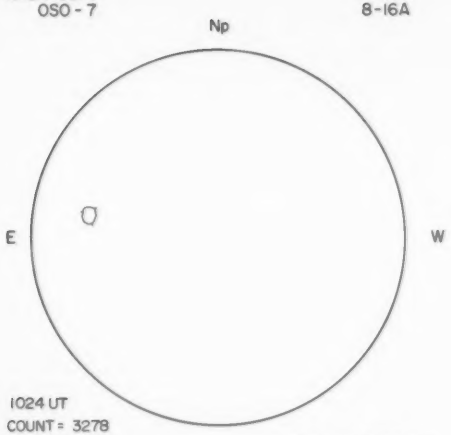
p
SUNSPOTS
NRL
OSO-7
TV SCAN DIRECTION
WHITE-LIGHT
CORONA
VISIBLE
W
TWO DIAMETRAL STREAKS, ALWAYS AT 90° TO SCAN DIRECTION
W
SHADOW AREA CAUSED BY OCCULTER SUPPORT
CORONA
NO DATA
1158-1405UT
Sp
Sp

63
May 74

MAY 22, 1974 (P=-

NASA GSFC
OSO - 7

X-RAY
8-16A



1024 UT
COUNT = 3278
ROLL = 95.3°
P-TH = -7.02

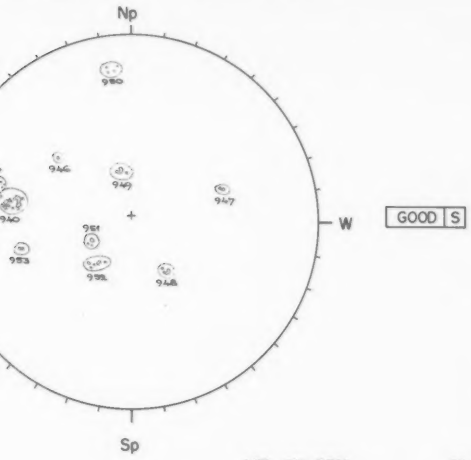
Counts per 0.125 sec.

McMATH-HUL

1235 UT

P=-19.05, B_o=-1.86, L_o=4.39)

-HULBERT CALCIUM REPORT

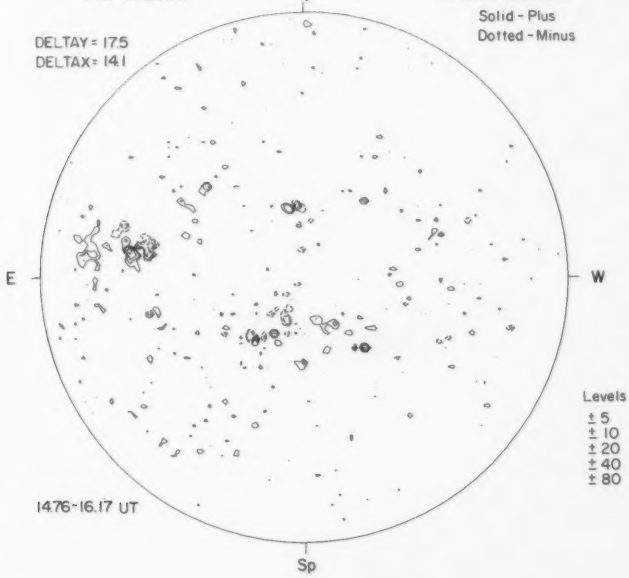


GOOD | S

MT. WILSON Np MAGNETOGRAM

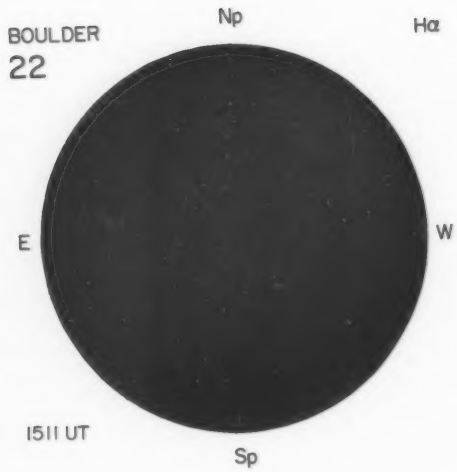
Solid - Plus
Dotted - Minus

DELTAY = 17.5
DELTAX = 14.1



Levels
± 5
± 10
± 20
± 40
± 80

14.76-16.17 UT


BOULDER
22
Np
Hα
E
W
1511 UT
Sp
BOULDER
E
1515 UT

Np
SUNSPOTS
W
CORONA
NO DATA
Sp

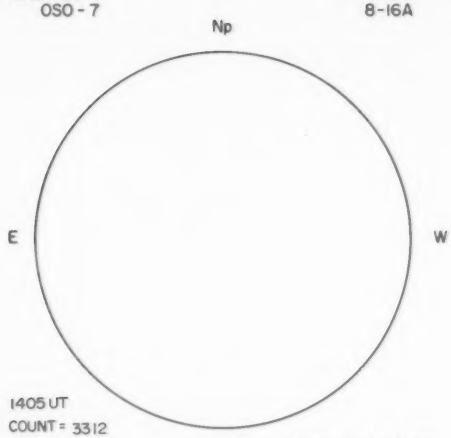
NRL
OSO-7
Np
WHITE-LIGHT
CORONA
E
W
1055-1404 UT
Sp

65
May 74

MAY 23, 1974 (P=-18

NASA GSFC
OSO - 7

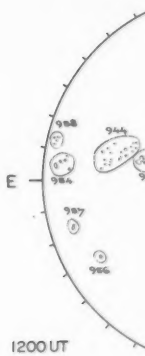
X-RAY
8-16A



1405 UT
COUNT = 3312
ROLL = 95.8°
P-TH = -7.06

Counts per 0.125 sec.

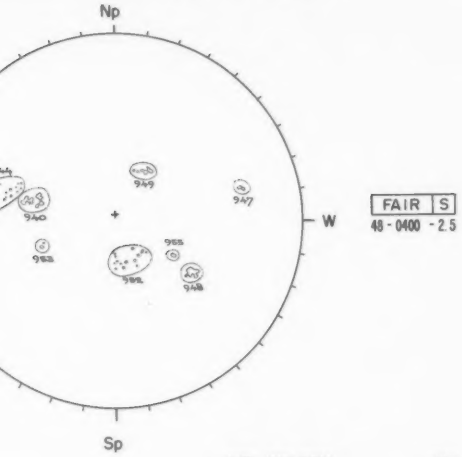
McMATH-HULB



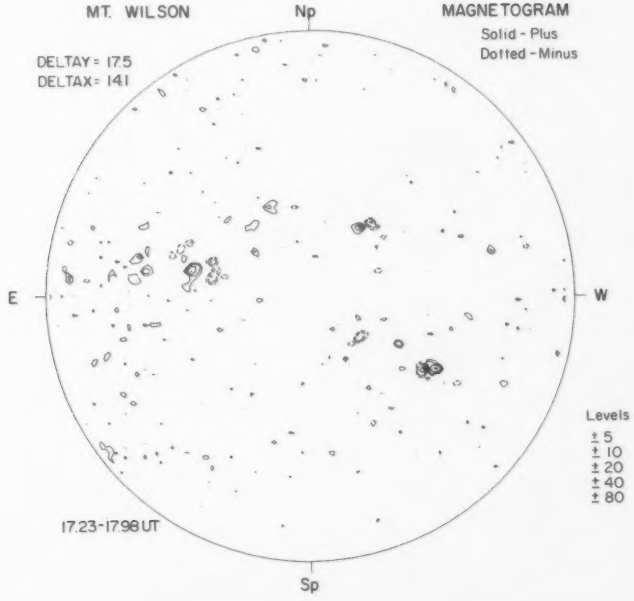
1200 UT

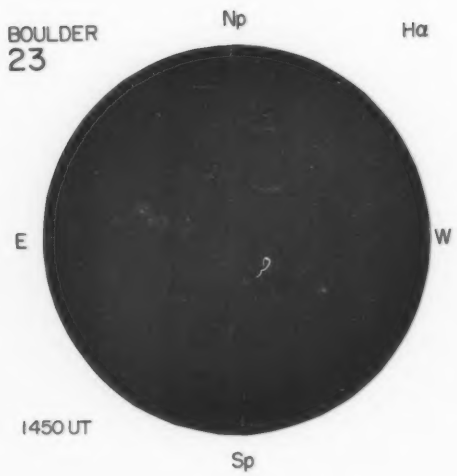
-18.73, B_o=-1.74, L_o=351.16)

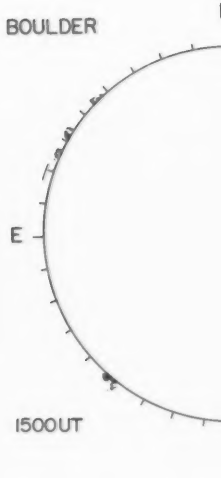
ULBERT CAL ^IUM REPORT

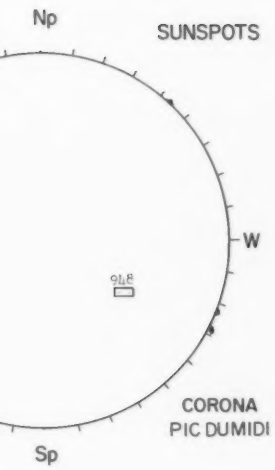


FAIR | S
48 - 0400 - 2.5




BOULDER
23
Np
Hα
E
W
Sp
1450 UT

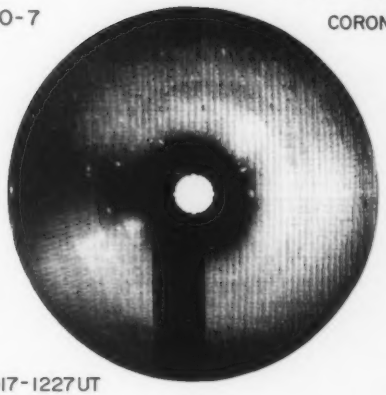

BOULDER
E
1500 UT



SUNSPOTS

CORONA
PIC DUMIDI

NRL
OSO-7



WHITE-LIGHT
CORONA

0917-1227UT

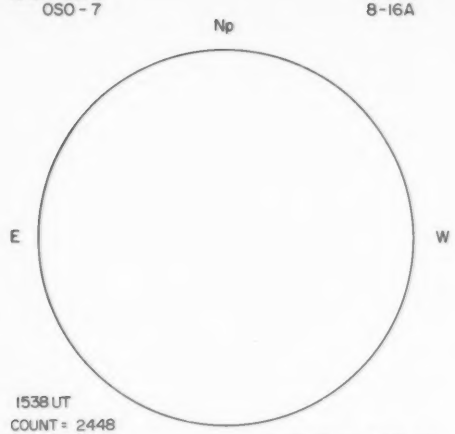
67
May 74

MAY 24, 1974 (P=-18

NASA GSFC
OSO-7

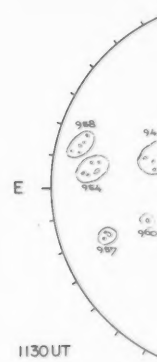
X-RAY
8-16A

McMATH-HULBE



1538 UT
COUNT = 2448
ROLL = 96.1°
P-TH = -7.08

Counts per 0.125 sec.

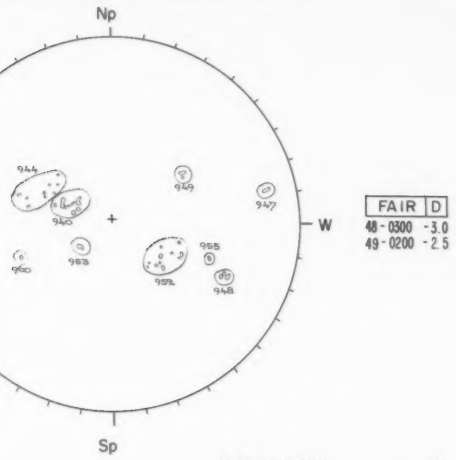


1130 UT

=-18.40, B_o=-1.62, L_o=337.93)

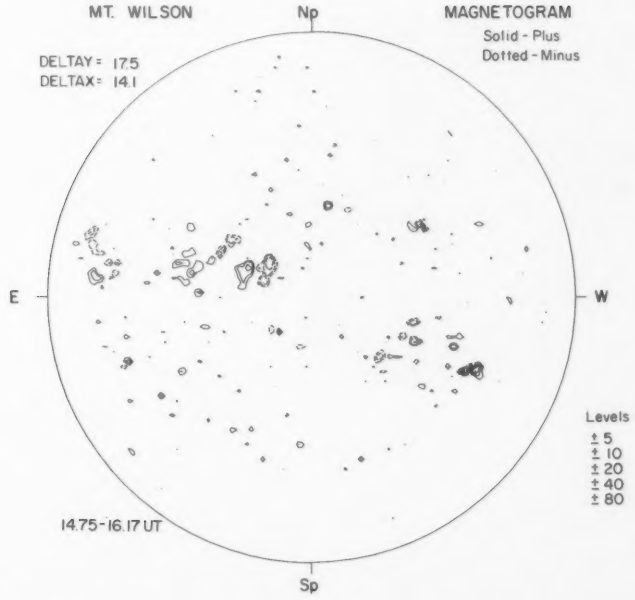
68
May 74

ULBERT CALCIUM REPORT



FAIR	D
48 - 0300	-3.0
49 - 0200	-2.5

MT. WILSON



MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
±5
±10
±20
±40
±80

BOULDER

24

Np

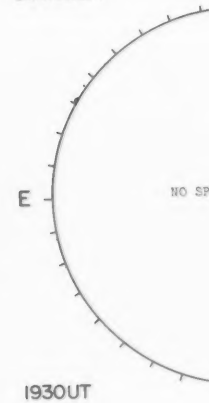
Hα

E

W

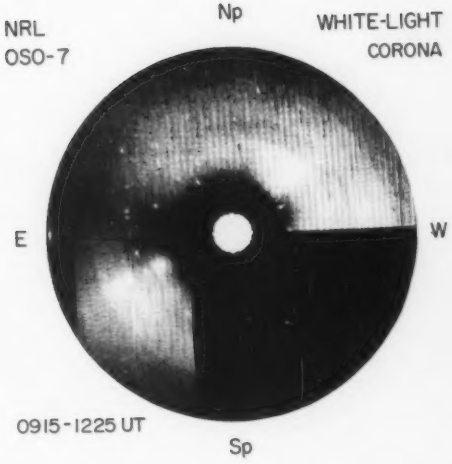
Sp

1418 UT



1930 UT

Np
SUNSPOTS
O SPOTS VISIBLE
W
CORONA
NORIKURA
Sp


NRL
OSO-7
Np
WHITE-LIGHT
CORONA
E
W
0915-1225 UT
Sp

69
May 74

MAY 25, 1974 (P=-1

NASA GSFC
OSO-7

X-RAY
8-16A

McMATH-HULB

Np

E

NO DATA

W

E

1330 UT

COUNT =
ROLL =
P-TH =

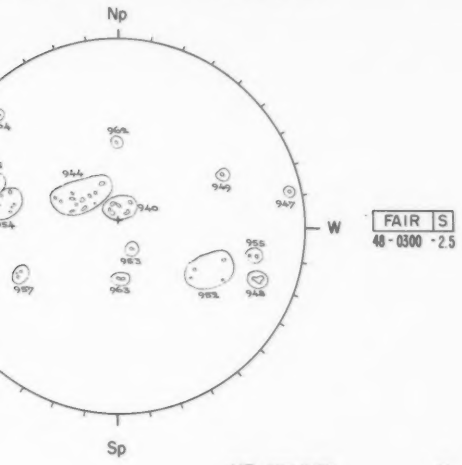
Sp

Counts per 0.125 sec.

=-18.07, B_o=-1.50, L_o=324.70)

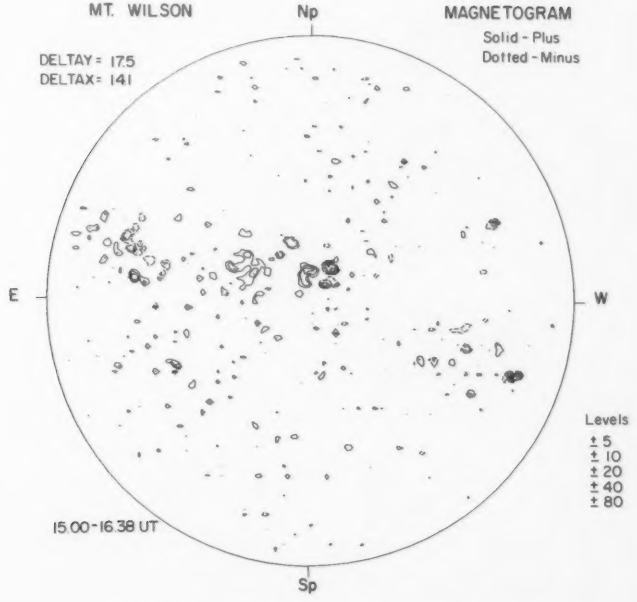
May 74 70

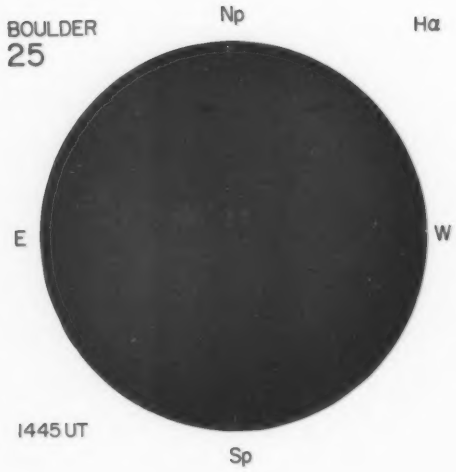
HULBERT CALCIUM REPORT

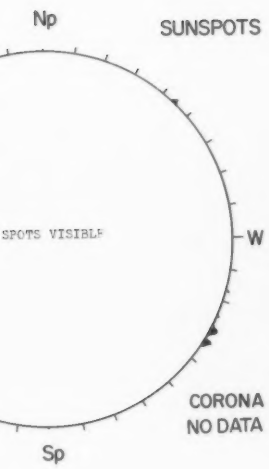


FAIR S
48 - 0300 -2.5

MT. WILSON MAGNETOGRAM




BOULDER
25
Np
Hα
E
W
Sp
1445 UT
BOULDER
E
NO SPOT
1510 UT


Np
SUNSPOTS
SPOTS VISIBLE
W
CORONA
NO DATA
Sp

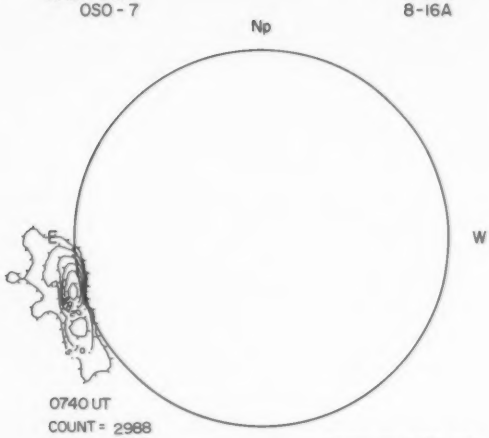
NRL
OSO-7
Np
WHITE-LIGHT
CORONA
E
W
0913-1358 UT
Sp

71
May 74

MAY 26, 1974 (P=-

NASA GSFC
OSO - 7

X-RAY
8-16A



0740 UT
COUNT = 2988
ROLL = 97.1°
P-TH = -7.12

Counts per 0.125 sec.

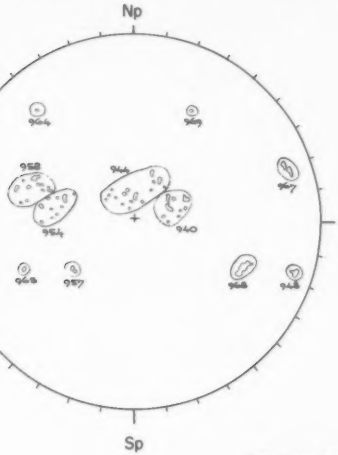
McMATH-HU

1115 UT

P=-17.74, B_o=-1.38, L_o=311.47)

May 74 72

-HULBERT CALCIUM REPORT



FAIR | D
40 - 0600 - 2.5
68 - 0700 - 3.0

MT. WILSON Np MAGNETOGRAM

Solid - Plus
Dotted - Minus

DELTAY =
DELTAX =

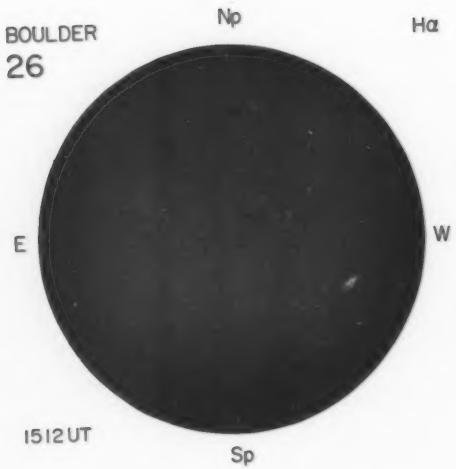
E

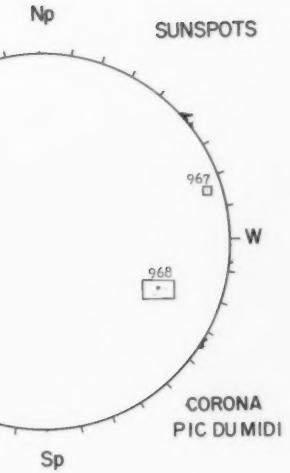
NO DATA

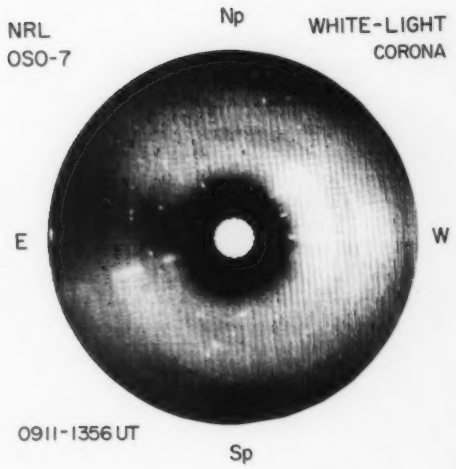
W

Levels
± 5
± 10
± 20
± 40
± 80

Sp


BOULDER
26
Np
Hα
E
W
Sp
1512 UT
BOULDER
E
970
1700 UT


Np
SUNSPOTS
967
W
968
CORONA
PIC DU MIDI
Sp


NRL
OSO-7
Np
WHITE-LIGHT
CORONA
E
W
0911-1356 UT
Sp

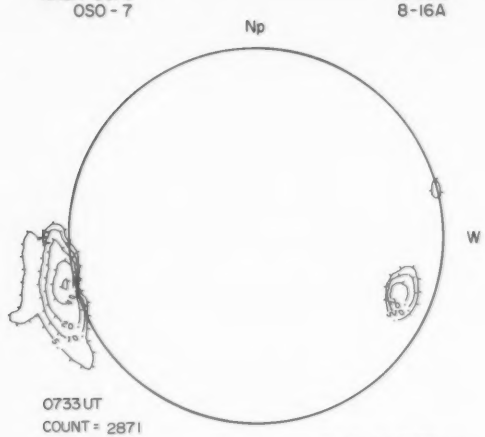
73
May 74

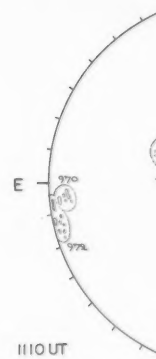
MAY 27, 1974 (P.=-

NASA GSFC
OSO - 7

X-RAY
8-16A

McMATH-HULBE





0733 UT
COUNT = 2871
ROLL = 978°
P-TH = -7.14

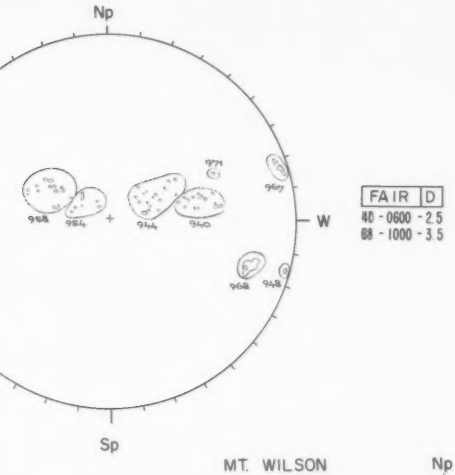
Counts per 0.125 sec.

1110 UT

=-17.39, B_o=-1.26, L_o=298.23)

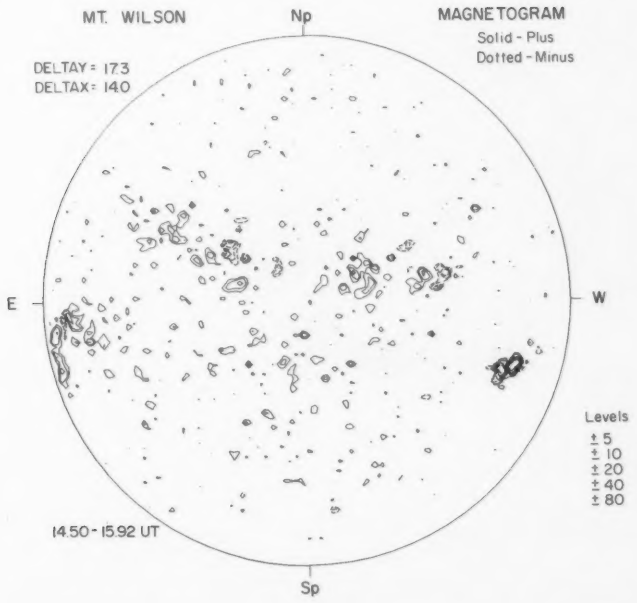
74
May 74

ILBERT CALCIUM REPORT



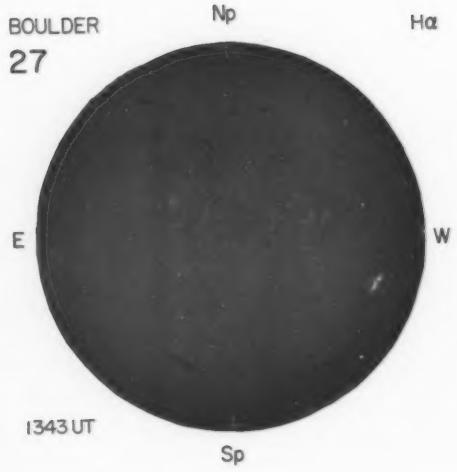
FAIR | D
40 - 0600 - 2.5
68 - 1000 - 3.5

MT. WILSON



MAGNETOGRAM
Solid - Plus
Dotted - Minus

Levels
± 5
± 10
± 20
± 40
± 80


BOULDER
27
Np
Hα
E
W
1343 UT
Sp
BOULDER
E
1435 UT

Np
SUNSPOTS
W
968
CORONA
WENDELSTEIN
Sp

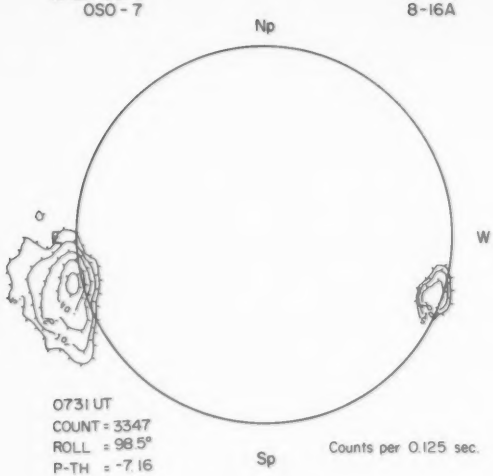
NRL
OSO-7
Np
WHITE-LIGHT
CORONA
E
W
1045-1354 UT
Sp

75
May 74

MAY 28, 1974 (P=-

NASA GSFC
OSO - 7

X-RAY
8-16A



0731 UT
COUNT = 3347
ROLL = 98.5°
P-TH = -7.16

Counts per 0.125 sec.

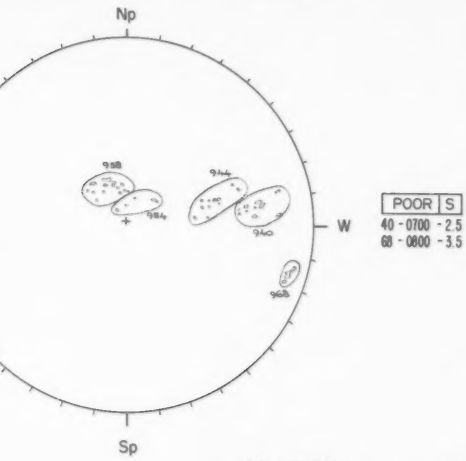
McMATH-HUL

1420 UT

=-17.05, B_o =-1.14, L_o = 285.00)

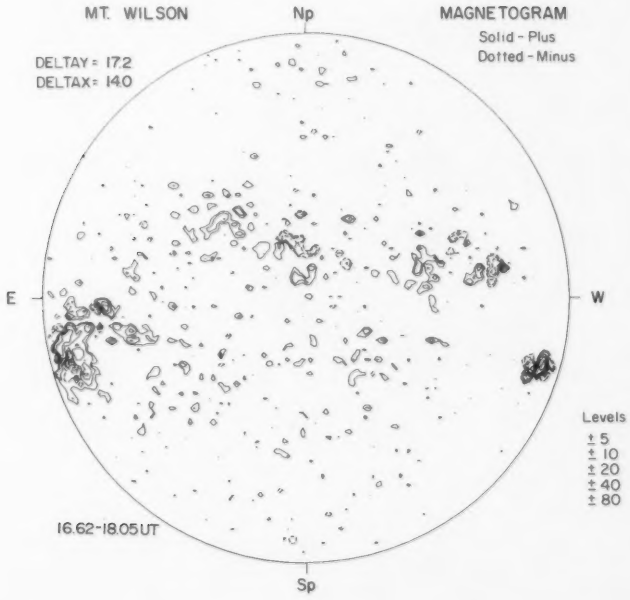
76
May 74

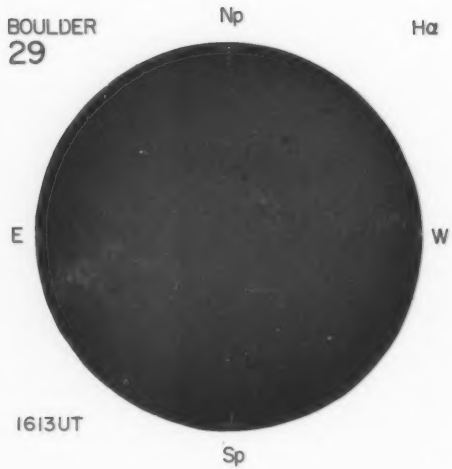
-HULBERT CALCIUM REPORT

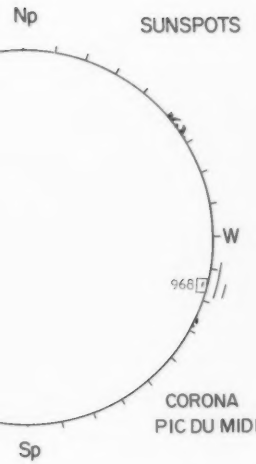


POOR	S
40 - 0700	- 2.5
68 - 0800	- 3.5

MT. WILSON



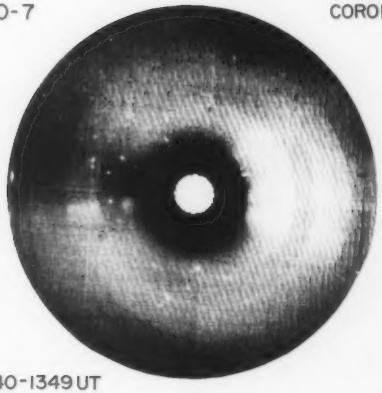

BOULDER
29
Np
Hα
E
W
1613UT
Sp
BOULDER
Np
E
202
240
214
1645UT
S



SUNSPOTS

CORONA
PIC DU MIDI

NRL
OSO-7



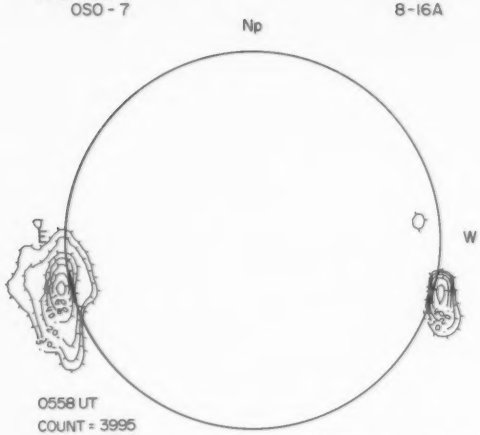
WHITE-LIGHT
CORONA

1040-1349 UT

77
May 74

NASA GSFC
OSO - 7

X-RAY
8-16A



0558 UT
COUNT = 3995
ROLL = 99.2°
P-TH = -7.18

Counts per 0.125 sec.

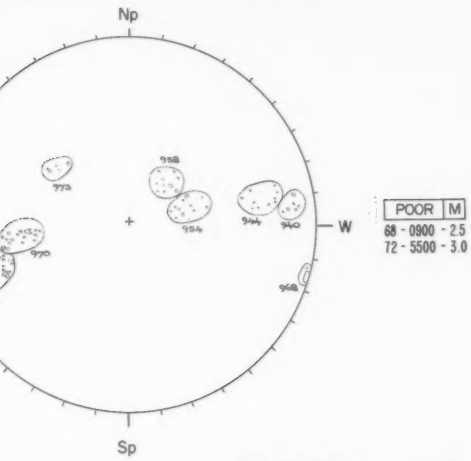
McMATH-HUL

2300 UT

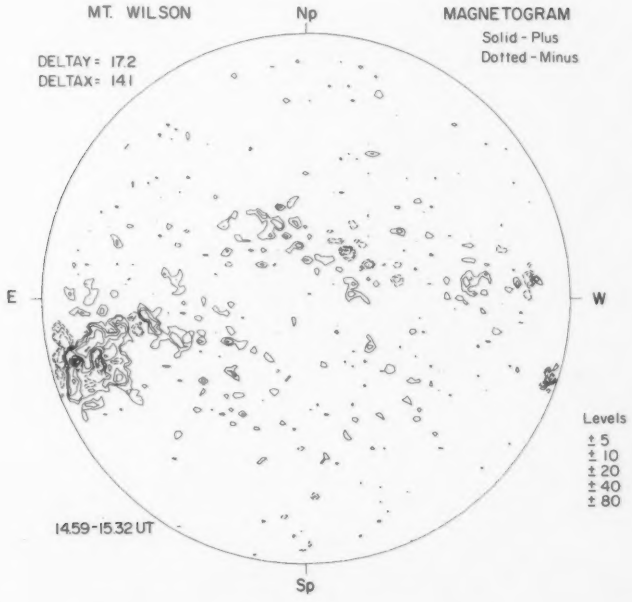
=-16.69, B_o=-1.02, L_o=271.77)

78
May 74

-HULBERT CALCIUM REPORT



POOR	M
68 - 0900	2.5
72 - 5500	3.0



RAMEY AFB

30

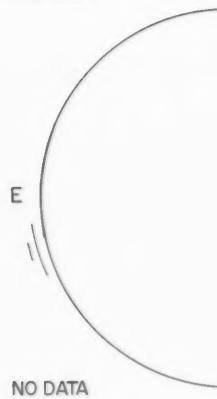
Np

Hα

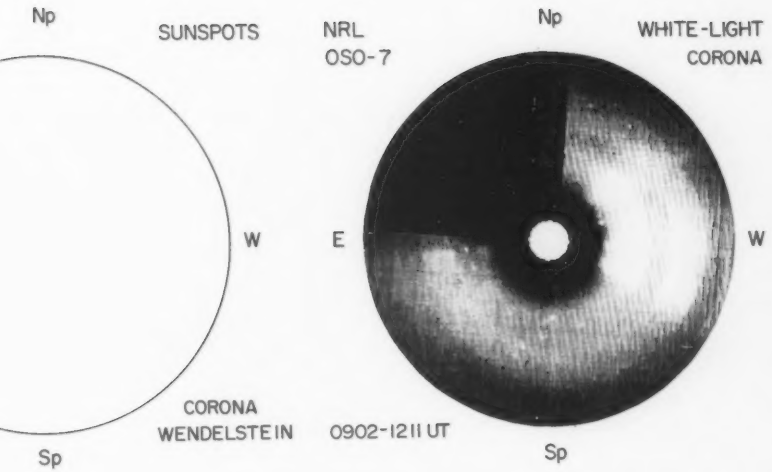
1210 UT

Sp

BOULDER

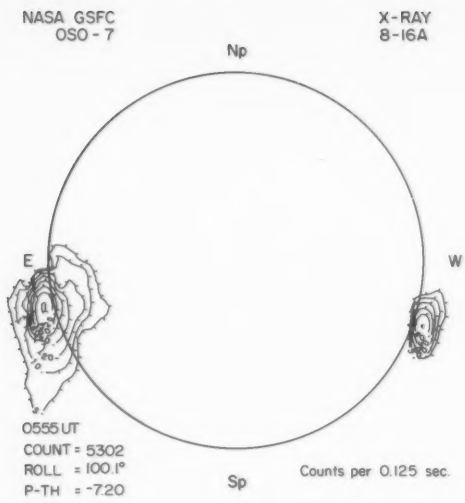


NO DATA


Np
SUNSPOTS
W
CORONA
WENDELSTEIN
Sp
NRL
OSO-7
Np
WHITE-LIGHT
CORONA
E
W
0902-1211 UT
Sp

79
May 74

MAY 30, 1974 (P=-

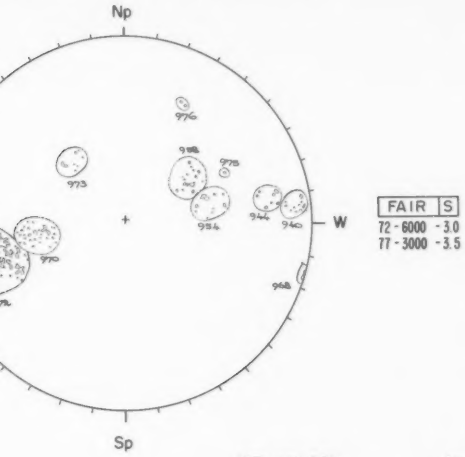

NASA GSFC
OSO - 7
X-RAY
8-16A
Np
E
W
Sp
0555 UT
COUNT = 5302
ROLL = 100.1°
P-TH = -7.20
Counts per 0.125 sec.

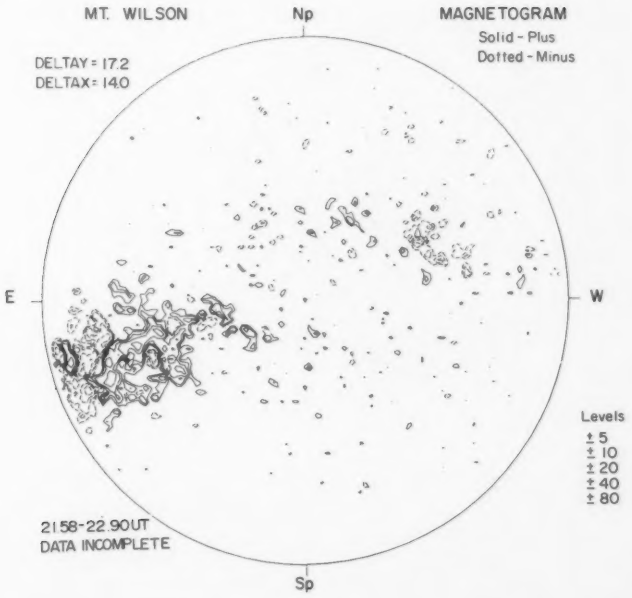
McMATH-HUL
E
1140 UT

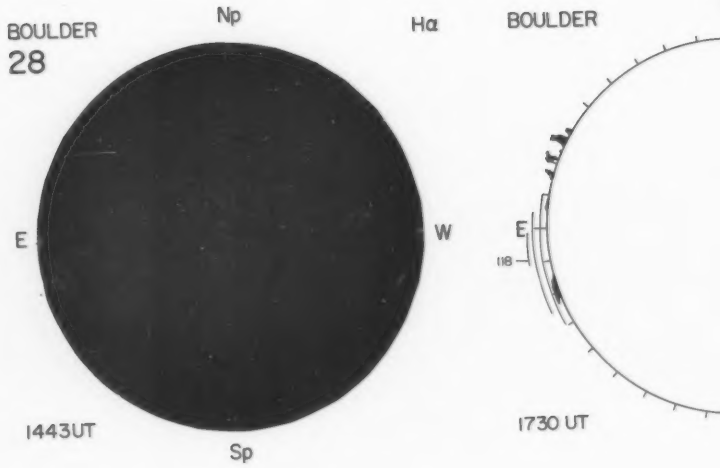
=-16.33, B_o=-0.90, L_o=258.54)

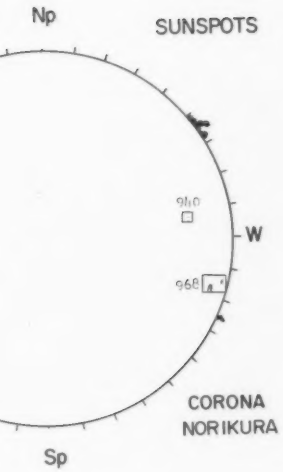
80
May 74

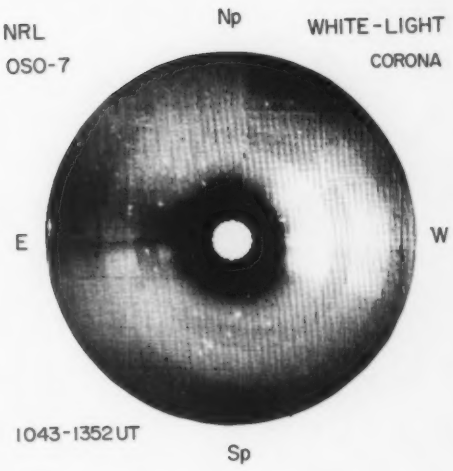
HULBERT CALCIUM REPORT






BOULDER
28
Np
Hα
E
W
1443UT
Sp
BOULDER
E
118
1730 UT


Np
SUNSPOTS
W
Sp
CORONA
NORIKURA

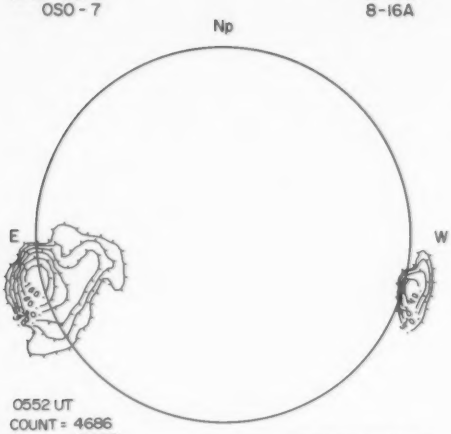

NRL
OSO-7
Np
WHITE-LIGHT
CORONA
E
W
1043-1352 UT
Sp

81
May 74

MAY 31, 1974 (P=-

NASA GSFC
OSO - 7

X-RAY
8-16A



0552 UT
COUNT = 4686
ROLL = 100.7°
P-TH = -7.21

Counts per 0.125 sec.

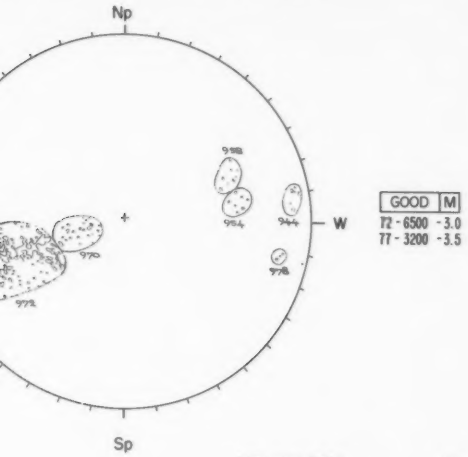
McMATH-HUL

1350 UT

=-15.97, B_o=-0.78, L_o = 245.30)

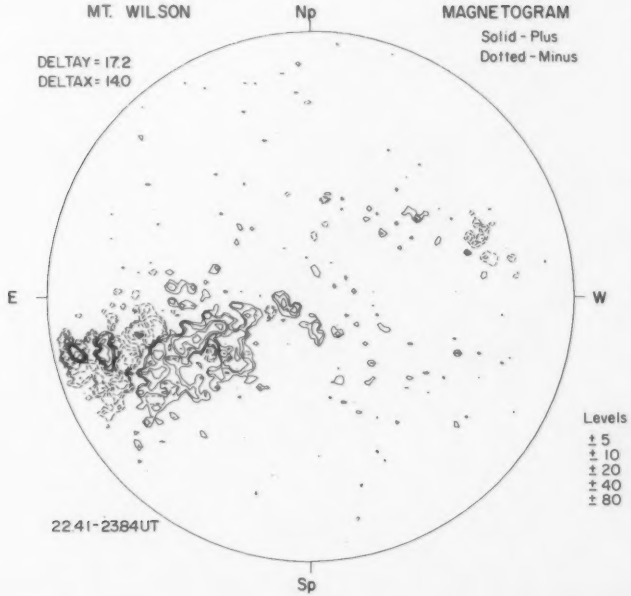
82
May 74

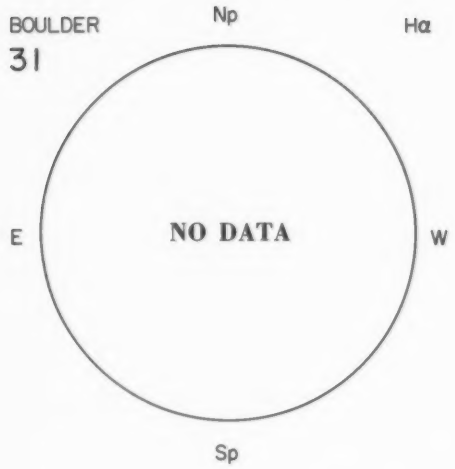
HULBERT CALCIUM REPORT

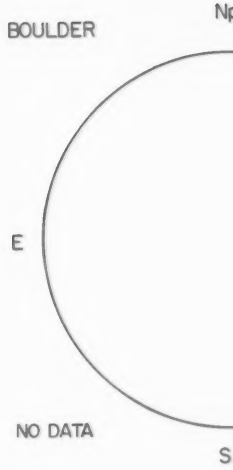


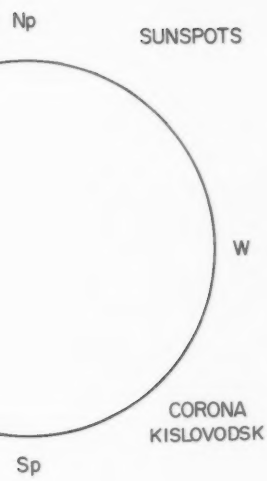
GOOD	M
72 - 6500	-3.0
77 - 3200	-3.5

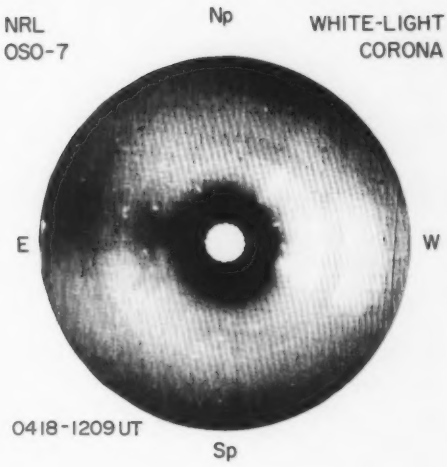
MT. WILSON MAGNETOGRAM




BOULDER
31
Np
Hα
E
NO DATA
W
Sp


BOULDER
Np
E
NO DATA
S


Np
SUNSPOTS
W
CORONA
KISLOVODSK
Sp


NRL
OSO-7
Np
WHITE-LIGHT
CORONA
E
W
0418-1209 UT
Sp

REGIONS OF SOLAR ACTIVITY

MAY 1974

MCMATH REGION 12909 CMP DATE April 30.7

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	2	12909	S22 W24	285	200	2.5									
74	5	3	12909	S22 W38	285	100	1.0									

MCMATH REGION 12907 CMP DATE 1.4

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	1	12907	S13 W02	277	100	1.0									

MCMATH REGION 12913 CMP DATE 1.6

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	1						19376	N05 W06	288	X					
74	5	2						19376	N04 W15	283	(AP)	1				
74	5	3	12913	N05 W26	273	300	2.5	19376	N05 W26	281	(BP)	1	B	0	3	BXO
74	5	4	12913	N05 W38	273	800	3.5	19376	N05 W44	286	(B)	2	R	50	11	DRO
74	5	5	12913	N05 W52	273	900	3.5	19376	N04 W54	283	(BP)	3	B	10	4	BXO
74	5	6	12913	N05 W66	272	900	3.0	19376	N04 W69	285	(BF)	3	B	20	3	BXO
74	5	7	12913	N05 W78	273	700	2.5									

MCMATH REGION 12894 CMP DATE 2.0

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	4	26	12894	N12 E78	263	400	1.5									
74	4	27	12894	N11 E64	263	300	2.0									
74	4	28	12894	N11 E49	266	400	2.0									
74	4	29	12894	N11 E36	266	500	2.0									
74	4	30	12894	N11 E16	268	300	2.0									
74	5	1	12894	N11 E06	269	400	2.0									
74	5	2	12894	N11 W07	268	400	2.0									
74	5	3	12894	N11 W21	268	400	1.5									
74	5	4	12894	N11 W30	265	500	2.0	19383	N11 W34	276	(BP)	2	R	10	5	CRO
74	5	5	12894	N10 W44	265	600	2.0									
74	5	6	12894	N12 W58	264	700	3.0	19383	N11 W59	275	(BF)	2	B	10	4	BXO
74	5	7	12894	N12 W70	265	700	2.5	19383	N12 W70	272	(AP)	1	B	0	1	AXX

MCMATH REGION 12910 CMP DATE 2.4

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	2	12910	S01 W01	262	100	1.0									

MCMATH REGION 12899 CMP DATE 3.0 RETURN OF REGION 12837 ROTATION 3

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	4	27	12899	N13 E74	253	400	1.5									
74	4	28	12899	N13 E60	255	400	2.0									
74	4	29	12899	N13 E47	255	400	1.5									
74	4	30	12899	N14 E27	257	200	1.5									
74	5	1	12899	N14 E19	256	300	1.5									
74	5	2	12899	N14 E06	255	400	1.5									
74	5	3	12899	N14 W09	256	400	1.5									
74	5	4	12899	N14 W20	255	400	1.5									
74	5	5	12899	N14 W34	255	400	2.0									
74	5	6	12899	N14 W47	253	300	1.0									
74	5	7	12899	N14 W59	254	300	1.0									

The column marked STA is inserted to indicate the source of data for sunspot area, count and classification.
B = Boulder M = Manila R = Ramey

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MCMATH REGION 12914 CMP DATE 3.6

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	3	12914	S31 E00	247	100	1.5									
74	5	4	12914	S31 W11	246	100	1.0									

MCMATH REGION 12916 CMP DATE 4.1

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	6	12916	S08 W34	240	300	1.5		S08 W35				B	0	1	AXX
74	5	7	12916	S08 W46	241	300	2.0	19385	S09 W46	248	(AF)	1	B	0	1	AXX
74	5	10	12916	S08 W87	243	200	1.0									

MCMATH REGION 12911 CMP DATE 4.2

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	1	12911	N09 E35	240	100	1.0									
74	5	2	12911	N09 E22	239	100	1.0									

MCMATH REGION 12902 CMP DATE 4.9

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	4	28	12902	N08 E87	228	100	1.0									
74	4	29	12902	N08 E76	226	400	2.0	19373	N08 E69	231	(AP)	2				
74	4	30	12902	N08 E54	230	400	2.0									
74	5	1	12902	N08 E45	230	400	2.0									
74	5	2	12902	N08 E32	229	400	2.5	19379	N08 E28	240	X	1				
74	5	3	12902	N08 E17	230	400	2.5									
74	5	4	12902	N08 E05	230	400	3.0									
74	5	5	12902	N08 W08	229	300	2.5	19379	N08 W11	240	(BP)	2	B	0	1	AXX
74	5	6	12902	N08 W23	229	400	2.5		N09 W23				B	0	1	AXX
74	5	7	12902	N08 W35	230	300	2.0									
74	5	10	12902	N08 W76	232	200	1.0									

MCMATH REGION 12904 CMP DATE 5.6 RETURN OF REGION 12850 ROTATION 2

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	4	28						19371	S04 E88	221	AP					
74	4	29	12904	S04 E85	217	500	1.0	19371	S04 E77	223	(AP)	4	R	50	1	HSX
74	4	30	12904	S05 E64	220	700	3.5	19371	S03 E60	225	(AP)	5	R	90	1	HSX
74	4								S02 E64				R	90	1	HSX
74	5	1	12904	S05 E56	219	1000	2.0	19371	S04 E49	233	(AP)	6	B	120	2	HSC
74	5	2	12904	S05 E43	218	1000	2.0	19371	S03 E35	233	(AP)	4	R	120	1	HSX
74	5	3	12904	S05 E27	220	900	2.0	19380	S06 E14	241	(AP)	1				
74	5							19371	S03 E22	233	(AP)	5	B	100	9	CSI
74	5								S03 E21				B	100	1	HSX
74	5	4	12904	S04 E14	221	800	2.0	19371	S03 E05	237	(AP)	5	R	10	3	HRX
74	5							19384	S06 E12	230	(B)	2	R	150	1	HSX
74	5	5	12904	S05 E00	221	1000	2.5	19371	S03 W04	233	(BP)	5	B	110	2	HSX
74	5							19384	S06 E02	227	(BF)	4	B	130	13	CSO
74	5								S05 E00				B	20	9	BXO
74	5	6	12904	S05 W13	219	1100	3.0	19371	S03 W18	234	(AP)	5	B	90	1	HSX
74	5							19384	S06 W13	229	(BP)	4	B	110	10	HSX
74	5								S05 W12				B	40	10	CSO
74	5	7	12904	S04 W25	220	1300	3.0	19371	S02 W32	234	(AP)	5	B	70	1	HSX
74	5							19384	S06 W26	228	(BP)	4	B	40	4	CSO
74	5	8						19371	S02 W46	235	(AP)	4	B	70	1	HSX
74	5							19384	S05 W41	230	(BP)	3	B	40	3	CSO
74	5	9						19371	S02 W59	235	(AP)	4				
74	5							19384	S04 W57	233	(AP)	3	B	70	1	HSX
74	5								S05 W54				B	10	1	AXX
74	5	10	12904	S04 W66	222	1000	2.5	19371	S02 W73	236	(AP)	4	B	70	1	HSX
74	5							19384	S04 W70	233	(AP)	2	B	0	1	AXX
74	5	11	12904	S04 W80	223	800	1.5	19371	S02 W89	239	AP		B	20	1	HSX
74	5							19384	S04 W86	236	AP					

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MCMATH REGION 12912 CMP DATE 5.8

CALCIUM PLAGE DATA								SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	2	12912	N08 E43	218	100	1.0									

MCMATH REGION 12906 CMP DATE 7.7 RETURN OF REGION 12848 ROTATION 2

CALCIUM PLAGE DATA								SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	4	30	12906	S08 E83	201	2000	3.0	19374	S08 E82	203	(AP)	4				
74	5	1	12906	S08 E77	198	3400	3.5	19374	S08 E74	208	(D)	4	B	160	10	DKC
74	5							19377	S10 E80	202	(A)	3				
74	5							19378	S13 E81	201	(BP)	4	B	160	9	DAC
74	5	2	12906	S11 E66	195	8000	3.5	19374	S08 E56	212	(D)	5	R	170	12	DAI
74	5							19377	S09 E68	200	(B)	2				
74	5							19378	S12 E69	199	(BP)	4	R	160	10	DAI
74	5	3	12906	S11 E54	193	9000	3.5	19374	S08 E44	211	(BP)	6	B	20	6	BXI
74	5							19377	S09 E53	202	(A)	3				
74	5							19381	S16 E53	202	(A)	2				
74	5							19378	S13 E56	199	(BP)	5	B	240	17	CSI
74	5	4	12906	S12 E42	193	9500	3.5	19374	S08 E26	216	(AP)	4				
74	5							19377	S10 E36	206	(A)	2	R	170	9	CSI
74	5								S08 E40				R	10	7	AXX
74	5							19381	S16 E36	206	(A)	2				
74	5							19378	S13 E41	201	(BP)	4	R	460	28	DAI
74	5								S12 E43				R	460	28	EAI
74	5	5	12906	S12 E28	193	9200	3.5	19374	S08 E17	212	(AP)	5				
74	5							19381	S17 E25	204	(A)	2				
74	5							19377	S10 E26	203	(A)	3	B	0	16	BXI
74	5							19378	S13 E31	198	(BP)	5	B	340	96	CKI
74	5	6	12906	S12 E15	191	11000	3.5	19374	S08 E02	214	(AP)	5				
74	5							19377	S10 E12	204	(A)	2	B	10	11	BXI
74	5							19378	S13 E17	199	(BP)	4	B	310	39	CKI
74	5	7	12906	S12 E03	192	11000	3.5	19374	S08 W13	215	(AP)	5	B	100	14	CSO
74	5							19377	S10 E00	202	(A)	3	B	10	6	BXO
74	5							19378	S13 E04	198	(BP)	5	B	260	33	CKI
74	5							19386	S09 E15	187	(A)	2				
74	5	8						19374	S07 W26	215	(AP)	4	B	70	11	CSO
74	5							19377	S09 W14	203	(A)	3	B	10	8	BXO
74	5							19378	S13 W09	198	(BP)	4	B	200	35	CKO
74	5							19386	S10 E01	188	(BP)	1				
74	5	9						19374	S07 W36	212	(AP)	4	B	50	6	CSO
74	5							19377	S09 W27	203	(A)	3	B	10	7	BXO
74	5							19378	S12 W24	200	(BP)	4	B	150	16	CAO
74	5							19388	S19 W13	189	(AF)	2	B	0	3	AXX
74	5							19386	S13 W09	185	(AF)	1				
74	5	10	12906	S12 W37	193	10000	3.0	19374	S08 W53	216	(AP)	4	B	40	5	CSO
74	5							19377	S10 W43	206	(A)	2	B	0	3	BXO
74	5							19388	S20 W27	190	(AF)	2				
74	5	11	12906	S12 W50	193	9300	3.0	19374	S07 W68	218	(BP)	3	B	40	1	HSX
74	5							19377	S10 W55	205	(A)	2	B	40	7	CSI
74	5								S09 W55				B	10	1	AXX
74	5							19378	S13 W50	200	(BP)	3				
74	5							19388	S19 W39	189	(AF)	1	B	10	1	AXX
74	5	12	12906	S12 W64	191	8800	3.0	19374	S07 W80	216	(AP)	3	B	40	1	HSX
74	5							19377	S10 W66	202	(A)	1				
74	5							19378	S13 W66	202	(AP)	2	B	40	2	HSX
74	5	13	12906	S12 W77	191	7500	3.0									

MCMATH REGION 12915 CMP DATE 9.4 RETURN OF REGION 12849 ROTATION 2

CALCIUM PLAGE DATA								SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	3	12915	S13 E80	167	1000	2.0	19382	S12 E78	177	(AP)	3	B	30	1	HSX
74	5	4	12915	S14 E68	167	1500	2.0	19382	S13 E59	183	(AP)	3	R	80	2	HSX
74	5	5	12915	S13 E54	167	1000	2.0	19382	S13 E49	180	(AP)	5	B	60	2	HSX
74	5	6	12915	S13 E40	166	900	2.0	19382	S13 E35	181	(AP)	5	B	60	1	HSX
74	5	7	12915	S13 E27	168	1000	2.0	19382	S13 E22	180	(AP)	5	B	50	1	HSX
74	5	8						19382	S13 E08	181	(AP)	5	B	40	1	HSX
74	5	9						19382	S12 W05	181	(AP)	5	B	40	1	HSX
74	5	10	12915	S13 W14	170	1200	2.0	19382	S13 W18	181	(AP)	5	B	40	1	HSX
74	5								S19 W25				B	0	3	AXX
74	5	11	12915	S13 W27	170	1400	3.0	19382	S12 W32	182	(AP)	5	B	40	5	CSI
74	5	12	12915	S13 W41	168	1400	2.5	19382	S12 W45	181	(AP)	4	B	60	6	HSX
74	5	13	12915	S13 W55	169	1300	2.5	19382	S13 W60	183	(AP)	3				
74	5							19392	S10 W58	181	(BP)	3	B	60	1	HSX
74	5								S10 W57				B	10	3	BXO

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74	5	14	12915	S13 W68	170	1500	3.0	19392	S10 W74	184	(AP)	1	B	50	1	HSX
74	5							19382	S13 W71	181	(AP)	3				
74	5	15	12915	S13 W81	171	1500	3.0	19382	S13 W86	183	AP					

MCMATH REGION 12920 CMP DATE 10.9

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	7	12920	N12 E48	147	100	1.0									
74	5	10	12920	N12 E06	150	100	1.0									
74	5	11	12920	N11 W11	154	200	2.0	19389	N12 W15	165	(BP	2	B	10	2	AXX
74	5	12	12920	N11 W25	152	200	1.5	19389	N06 W21	157	(B)	1	B	0	1	AXX
74	5	13	12920	N11 W39	153	200	1.5									
74	5	14	12920	N12 W53	155	100	1.0									
74	5	15	12920	N12 W65	155	100	1.0									

MCMATH REGION 12921 CMP DATE 11.2 RETURN OF REGION 12849 ROTATION 4

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	6	12921	S14 E65	141	600	1.0									
74	5	7	12921	S15 E50	145	700	1.0									
74	5	10	12921	S16 E10	146	800	2.0									
74	5	11	12921	S17 W07	150	800	2.0									
74	5	12	12921	S16 W20	147	700	1.5									
74	5	13	12921	S17 W33	147	700	1.5									
74	5	14	12921	S17 W45	147	600	1.5									
74	5	15	12921	S17 W58	148	600	1.5									

MCMATH REGION 12917 CMP DATE 12.8 RETURN OF REGION 12856 ROTATION 2

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	6	12917	S13 E80	126	800	2.0									
74	5	7	12917	S12 E70	125	1400	2.0									
74	5	8						19387	S10 E60	129	(AF)	2				
74	5	9						19387	S11 E45	131	B					
74	5	10	12917	S12 E31	125	1600	2.0	19387	S10 E33	130	(AF)	2				
74	5	11	12917	S12 E17	126	2000	3.5									
74	5	12	12917	S12 E03	124	1300	2.5	19391	S16 W04	140	(AP)	2	B	0	3	AXX
74	5	13	12917	S12 W10	124	1200	2.5	19391	S17 W18	141	(AP)	2				
74	5							19393	S12 W08	131	(AF)	2	B	0	5	BXX
74	5	14	12917	S12 W23	125	1300	2.5	19391	S17 W31	141	(AP)	2				
74	5							19393	S13 W22	132	(AF)	1	B	10	2	AXX
74	5	15	12917	S12 W36	126	1300	2.5									
74	5	17	12917	S12 W66	126	1100	2.5									
74	5	18	12917	S10 W76	126	600	2.0									

MCMATH REGION 12930 CMP DATE 13.2

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	15	12930	S33 W30	120	100	1.0									

MCMATH REGION 12937 CMP DATE 13.2

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	18	12937	N16 W70	120	200	1.5									

MCMATH REGION 12925 CMP DATE 13.7

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	14	12925	N21 W12	114	100	1.0									

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MCMATH REGION 12918 CMP DATE 14.1 RETURN OF REGION 12876 ROTATION 1

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	7	12915	N04 E65	110	300	1.5									
74	5	10	12918	N04 E47	109	1200	2.5									
74	5	11	12918	N04 E33	110	1500	3.5	19390	N04 E28	122	(BP)	2				
74	5	12	12918	N04 E19	108	1200	3.0	19390	N04 E14	122	(AP)	2	B	0	2	AXX
74	5	13	12918	N04 E06	108	1200	3.0	19390	N04 E02	121	(B)	2	B	0	2	AXX
74	5	14	12918	N04 W07	109	1000	3.0	19390	N06 W09	119	(A)	1	B	10	2	AXX
74	5	15	12918	N04 W19	109	1400	3.5	19390	N05 W24	121	(BP)	3	B	20	7	CSO
74	5	16						19390	N05 W38	113	(BP)	3	B	20	4	BXO
74	5	17	12918	N04 W53	113	1400	3.5	19390	N05 W56	116	(AP)	2	B	20	3	AXX
74	5	18	12918	N05 W64	114	1400	3.0									
74	5	19	12918	N05 W80	114	1000	2.5									

MCMATH REGION 12926 CMP DATE 14.6

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	14	12926	S15 E01	101	100	1.5									

MCMATH REGION 12823 CMP DATE 15.2

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	11	12823	S46 E48	95	200	1.5									

MCMATH REGION 12934 CMP DATE 15.3

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	17	12934	N28 W32	92	100	2.0									

MCMATH REGION 12922 CMP DATE 15.6

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	11	12922	N13 E54	89	100	1.5									
74	5	12	12922	N13 E40	87	100	1.8									
74	5	13	12922	N13 E26	88	100	1.0									
74	5	14	12922	N13 E13	89	100	1.0									

MCMATH REGION 12942 CMP DATE 15.9

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	20	12942	S07 W61	84	100	1.0									

MCMATH REGION 12935 CMP DATE 16.7

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	17	12935	S45 W14	74	200	1.5									

MCMATH REGION 12924 CMP DATE 16.9

CALCIUM PLAGE DATA							SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	12	12924	N13 E58	69	100	2.0									
74	5	13	12924	N14 E44	70	100	1.0									

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MCMATH REGION 12931 CMP DATE 17.1

				CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	5	15	12931	S22 E16	72	100	1.0								
74	5	17	12931	S22 W08	68	100	1.0								

MCMATH REGION 12927 CMP DATE 17.4

				CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	5	14	12927	N26 E38	64	100	2.0								

MCMATH REGION 12928 CMP DATE 17.6

				CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	5	14	12928	N21 E40	62	100	1.0								

MCMATH REGION 12936 CMP DATE 18.5

				CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	5	17	12936	S03 E10	50	200	1.5								
74	5	18	12936	S02 W01	51	100	2.0								

MCMATH REGION 12939 CMP DATE 18.8

				CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	5	19	12939	S37 W12	46	100	2.0								

MCMATH REGION 12932 CMP DATE 18.9

				CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	5	15	12932	N15 E48	42	100	2.5								
74	5	17	12932	N16 E20	40	300	1.5								
74	5	18	12932	N17 E05	45	300	1.0								

MCMATH REGION 12933 CMP DATE 20.2

				CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	5	15	12933	S15 E63	27	200	2.0								
74	5	17	12933	S16 E32	28	100	1.5								

MCMATH REGION 12947 CMP DATE 20.3

				CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	5	22	12947	N08 W29	26	100	1.5								
74	5	23	12947	N08 W42	27	100	1.5								
74	5	24	12947	N08 W56	28	200	1.0								
74	5	25	12947	N10 W70	28	100	1.0								

*An asterisk beside the "Return of Region" number indicates that the new region is only part of the area of the old region.

REGIONS OF SOLAR ACTIVITY

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MCMATH REGION 12929 CMP DATE 20.6 RETURN OF REGION 12873* ROTATION 2

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	14	12929	N04 E85	17	100	2.0									
74	5	15	12929	N03 E70	20	100	1.5									
74	5	17	12929	N03 E38	22	100	1.5									
74	5	18	12929	N03 E27	23	100	1.5									

MCMATH REGION 12948 CMP DATE 21.6

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	22	12948	S17 W12	9	200	2.0	19394	S18 W12	8	(B)	2	B	20	2	BXO
74	5	23	12948	S17 W25	10	400	2.5	19394	S18 W26	11	(B)	2	B	20	2	BXO
74	5	24	12948	S17 W39	11	300	3.0		S16 W38				R	0	4	BXO
74	5	25	12948	S17 W52	10	300	2.5									
74	5	26	12948	S17 W65	10	400	2.0									
74	5	27	12948	S17 W78	10	300	1.0									

MCMATH REGION 12967 CMP DATE 21.9

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	25	12967					19395	N16 W45	1	BP					
74	5	26	12967	N16 W60	5	600	2.0	19395	N16 W59	11	(BP)	2				
74	5	27	12967	N16 W72	4	600	1.5									

MCMATH REGION 12955 CMP DATE 22.1

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	23	12955	S13 W19	4	100	1.5									
74	5	24	12955	S13 W31	3	100	1.0									
74	5	25	12955	S12 W47	5	100	1.0									

MCMATH REGION 12949 CMP DATE 22.8

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	22	12949	N13 E04	354	200	2.0									
74	5	23	12949	N13 E10	335	200	2.0									
74	5	24	12949	N13 W23	355	200	2.5									
74	5	25	12949	N13 W36	354	100	2.0									

MCMATH REGION 12943 CMP DATE 23.0

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	20	12943	S09 E32	352	100	1.5									

MCMATH REGION 12950 CMP DATE 23.4

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	22	12950	N52 E11	347	100	1.0									

MCMATH REGION 12951 CMP DATE 23.4

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	22	12951	S08 E12	346	100	1.5									

REGIONS OF SOLAR ACTIVITY

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MCMATH REGION 12952 CMP DATE 23.4

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	22	12952	S15 E11	347	300	2.0									
74	5	23	12952	S14 W04	349	300	1.5									
74	5	24	12952	S14 W16	348	400	1.0									
74	5	25	12952	S14 W30	348	300	1.5									

MCMATH REGION 12938 CMP DATE 23.5

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	18	12938	S16 E66	345	100	1.5									
74	5	19	12938	S15 E50	345	100	1.5									

MCMATH REGION 12968 CMP DATE 23.7

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	26	12968	S16 W37	342	700	3.0	19396	S15 W39	351	(BF)	3	B	50	15	CRO
74	5	27	12968	S16 W51	343	1000	3.5	19396	S16 W52	343	(B)	2	B	140	19	DAO
74	5	28	12968	S15 W65	343	800	3.5	19396	S16 W73	359	(BF)	4	B	240	13	DAO
74	5	29	12968	S15 W82	342	900	2.5	19396	S16 W83	356	BF		B	70	5	HAX
74	5	30	12968	S15 W89	342	200	1.0									

MCMATH REGION 12941 CMP DATE 24.2

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	19	12941	N19 E59	336	100	1.0									

MCMATH REGION 12946 CMP DATE 24.4

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	21	12946	N20 E37	335	100	1.5									
74	5	22	12946	N19 E25	333	100	1.5									

MCMATH REGION 12945 CMP DATE 24.5

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	21	12945	N06 E40	332	100	2.0									

MCMATH REGION 12969 CMP DATE 24.7

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	26	12969	N36 W23	328	200	1.5									

MCMATH REGION 12971 CMP DATE 24.7

				CALCIUM PLAGE DATA				SUNSPOT DATA								
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	27	12971	N14 W36	328	100	1.5									

REGIONS OF SOLAR ACTIVITY

MAY 1974

MCMATH REGION 12953 CMP DATE 25.3

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	22	12953	S10 E37	321	100	1.5									
74	5	23	12953	S10 E24	321	100	1.0									
74	5	24	12953	S09 E11	321	100	1.5									
74	5	25	12953	S09 W03	321	100	1.0									

MCMATH REGION 12963 CMP DATE 25.5

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	25	12963	S18 W01	319	200	1.0									

MCMATH REGION 12940 CMP DATE 25.6

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	19	12940	N05 E83	312	800	2.5									
74	5	20	12940	N05 E69	315	900	2.5									
74	5	21	12940	N05 E55	317	700	2.0									
74	5	22	12940	N05 E41	317	600	2.0									
74	5	23	12940	N05 E27	318	600	2.0									
74	5	24	12940	N05 E14	318	600	2.0									
74	5	25	12940	N05 E00	318	600	2.0									
74	5	26	12940	N04 W13	318	600	2.5									
74	5	27	12940	N04 W27	319	600	2.5									
74	5	28	12940	N05 W42	320	700	2.5	19397	N03 W48	334	A		B	0	1	AXX
74	5								N07 W50				B	0	1	AXX
74	5	29	12940	N05 W60	320	400	2.0									
74	5	30	12940	N05 W68	321	400	1.0									

MCMATH REGION 12962 CMP DATE 25.6

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	25	12962	N25 E01	317	100	2.0									

MCMATH REGION 12944 CMP DATE 26.4 RETURN OF REGION 12901 ROTATION 2

				CALCIUM PLAGE DATA				SUNSPOT DA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	20	12944	N07 E78	306	400	1.0									
74	5	21	12944	N07 E65	307	400	1.5									
74	5	22	12944	N07 E52	306	400	1.5									
74	5	23	12944	N07 E39	306	400	1.0									
74	5	24	12944	N07 E25	307	400	1.0									
74	5	25	12944	N07 E11	307	500	1.5									
74	5	26	12944	N08 E00	305	800	2.0									
74	5	27	12944	N08 W14	306	700	1.5									
74	5	28	12944	N07 W28	306	600	1.0									
74	5	29	12944	N07 W45	305	300	1.0									
74	5	30	12944	N07 W52	305	200	1.0									
74	5	31	12944	N07 W64	302	200	1.0									

MCMATH REGION 12960 CMP DATE 26.8

				CALCIUM PLAGE DATA				SUNSPOT DATA							
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H	STA	AREA	CNT	CLASS
74	5	24	12960	S12 E30	302	100	1.5									

REGIONS OF SOLAR ACTIVITY

MAY 1974

MCMATH REGION 12978 CMP DATE 27.2

			CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
74	5	31	12978	S12 W58	296	100	1.0							

MCMATH REGION 12956 CMP DATE 27.3

			CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
74	5	23	12956	S25 E50	295	100	1.5							

MCMATH REGION 12975 CMP DATE 27.9

			CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
74	5	30	12975	N15 W34	287	100	1.5							

MCMATH REGION 12957 CMP DATE 28.0

			CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
74	5	23	12957	S15 E62	283	100	1.0							
74	5	24	12957	S15 E48	284	100	1.0							
74	5	25	12957	S16 E34	284	200	1.5							
74	5	26	12957	S16 E20	285	200	1.0							

MCMATH REGION 12954 CMP DATE 28.1 RETURN OF REGION 12913 ROTATION 2

			CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
74	5	22	12954	N04 E77	281	200	1.0							
74	5	23	12954	N04 E65	280	300	1.5							
74	5	24	12954	N04 E52	280	300	1.0							
74	5	25	12954	N04 E39	279	300	1.5							
74	5	26	12954	N04 E25	280	500	2.0							
74	5	27	12954	N04 E08	284	400	1.5							
74	5	28	12954	N04 W02	280	300	1.0							
74	5	29	12954	N04 W19	279	300	1.5							
74	5	30	12954	N04 W26	279	300	1.5							
74	5	31	12954	N05 W38	276	100	1.0							
74	6	01	12954	N05 W51		100	1.0							
74	6	02	12954	N06 W64		100	1.0							
74	6	03	12954	N05 W77		100	1.0							

MCMATH REGION 12976 CMP DATE 28.7

			CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
74	5	30	12976	N38 W24	277	200	1.0							

MCMATH REGION 12958 CMP DATE 29.1 RETURN OF REGION 12894 ROTATION 2

			CALCIUM PLAGE DATA					SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT CLASS
74	5	23	12958	N13 E74	271	200	1.0							
74	5	24	12958	N12 E61	271	200	1.0							
74	5	25	12958	N10 E48	270	300	1.0							
74	5	26	12958	N10 E33	272	800	2.0							
74	5	27	12958	N10 E19	273	700	2.0							
74	5	28	12958	N10 E06	272	700	1.5							
74	5	29	12958	N12 W11	271	500	2.0							
74	5	30	12958	N12 W20	273	400	1.5							
74	5	31	12958	N13 W34	272	300	1.0							
74	6	01	12958	N13 W47		200	1.0							
74	6	02	12958	N13 W62		200	1.0							

REGIONS OF SOLAR ACTIVITY

MAY 1974

MCMATH REGION 12965 CMP DATE 29.3

				CALCIUM PLAGE DATA				SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	5	25	12965	S17 E52	266	100	1.5								
74	5	26	12965	S16 E38	267	100	1.5								

MCMATH REGION 12964 CMP DATE 29.5

				CALCIUM PLAGE DATA				SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	5	25	12964	N35 E52	266	100	1.0								
74	5	26	12964	N35 E40	265	100	1.0								

MCMATH REGION 12973 CMP DATE 31.8

				CALCIUM PLAGE DATA				SUNSPOT DATA						
YR	MO	DA	MC NO.	LAT CMD	L	AREA	INT	MW NO.	LAT CMD	L	MAG.	H STA	AREA	CNT	CLASS
74	5	26	12973						N15 E66			B	0	1	AXX
74	5	29	12973	N17 E24	236	300	1.0								
74	5	30	12973	N17 E17	236	200	1.0								

Considerable new plage (12906) has developed (primarily ahead of the location of large bright region 12848) since the previous rotation.
Region 12915 is the return of the new plage that formed in the leading part of 12849 during the previous rotation.
Region 12921 consists mostly of remnants of old plage from old regions 12849 and 12854.
Region 12947 is a small new plage that has formed in the location of old region 12873 and its remnants(12929).

More than half of the McMath regions listed here for May 1974 were very small and ephemeral plages that endured for only 1 or 2 days.

No calcium spectroheliograms were secured at the McMath-Hulbert Observatory on May 8, 9, and 16, 1974.
Sunspot observation were made at Mt. Wilson Observatory on all days in May 1974.

DAILY CALCIUM PLAGE INDEX

MAY 1974

YR	MO	DAY	INDEX	YR	MO	DAY	INDEX	YR	MO	DAY	INDEX
74	5	1	7.7	74	5	11	33.9	74	5	21	1.3
74	5	2	17.1	74	5	12	21.1	74	5	22	3.2
74	5	3	23.6	74	5	13	13.7	74	5	23	3.7
74	5	4	31.9	74	5	14	9.3	74	5	24	3.8
74	5	5	35.5	74	5	15	8.7	74	5	25	4.4
74	5	6	44.8	74	5	16	*	74	5	26	8.3
74	5	7	46.1	74	5	17	5.3	74	5	27	7.2
74	5	8	*	74	5	18	2.7	74	5	28	5.3
74	5	9	*	74	5	19	0.3	74	5	29	10.9
74	5	10	32.7	74	5	20	1.0	74	5	30	13.6
								74	5	31	19.0

* NO OBSERVATIONS

SUDDEN IONOSPHERIC DISTURBANCES

MAY 1974

DAY	UNIVERSAL TIME				WIDE SPREAD INDEX	NUMBER OF STATION REPORTS BY TYPE							KNOWN FLARE	McMATH REGION
	START	END	MAX	IMP		SWF	SCNA	SEA	SPA	LF-SPA	SES	SFD		
01	0031	0119	0042	1-	3	1			2			1	0030	12906
01	0138	0142	0140	1-	1							1	*	
01	1004	1055	1015	2	5	2	1	3	5		2		1005E	12906
01	1225	1315	1235	1-	5	3		2	3		5		1225	12906
02	0610	0700	0615	1-	3			1	1		1		0604	12906
02	0829	0900	0836	1+	3	2		1	3		2		0828	12906
02	1105	1155	1125	1-	5	1	1	2	5		2		NF	
02	1151	1225	1155	1-	1				1				1151	12906
02	1338	1450	1355	1-	3			1	1		2		NF	
02	1512	1540	1520	1-	3				1		3		1513	12906
02	2022	2045	2030	1-	3				1	1	3		2030E	12912
02	2121	1254	1214	1-	1				1				2133E	12912
03	0211	0300	0220	1-	5				3		2		0213E	12906
03	1406	1440	1409	1-	3	1			1	1	3		1400	12906
03	1927	2010	1930	1-	5	3			4	1	6		1924	12906
04	0045	0105	0052	1-	1				1				0049	12906
04	1005	1045	1015	1-	3	1		1	1		1		*	
05	0328	0353	0334	1-	1				1				0321	12906
06	1449	1645U	1504	1-	1						1		1449	12906
07	0526	0610	0538	1	5	2			3				0519	12906
07	1019U	1050	1027	1-	1			1					*	
07	1217	1235	1221	1-	5	1	1	1	3		4		1213	12906
07	1251	1320	1258	1+	5	4	1	3	4		9		1248	12906
08	0010	0145	0027	2-	5	3			3		5	2	0010	12906
08	0517	0554	0522	1-	1				1				0514	12906
08	0605	0628	0610	1-	3				2				0606	12918
09	0213	0252	0216	1-	1				1				0212	12906
09	1041	1110	1050	1-	3	2		3	3				1039	12906
09	1623	1700	1628	1-	1						1		1630E	12906
11	0810	0847	0827	1-	1				1				0807	12906
12	2146	2230	2258	1-	5	2			2		9		2141	12906
13	2122	2216	2140	1-	5	2		1	2		8		2115E	12906
25	1520U	1536	1526U	1-	1			1					1524	12970
26	1703	1745	1717	1-	3				1		4		NF	
27	1527	1600	1540	1-	1				1		1		1520	12968
27	1725	1815	1730	1-	5	1			2		8		1723	12972
27	2227	2246	2231	1-	3	1			1				2223E	12968
30	0723	0802	0727	1-	1			1					0720	12974
30	0826	0842	0832	1-	1			1					0824E	12974
30	1316	1327D	1327	1-	5	1			3		5		1309	12974
30	1346	1458D	1458	1-	5	2		1	3		5		1344	12974
30	1421	1430D	1430	1-	3				1		4		1421	X-RAY
30	1445	1521	1457	1-	5	1		1	2		4		1452E	12974

SUDDEN IONOSPHERIC DISTURBANCES

MAY 1974

DAY	UNIVERSAL TIME START	END	MAX	IMP	WIDE SPREAD INDEX	NUMBER OF STATION REPORTS BY TYPE SWF	SCNA	SEA	SPA	LF-SPA	SES	SFD	KNOWN FLARE	McMATH REGION
30	1600	1624	1612	1-	5				1		3		1605	12974
30	1625	1652	1643	1-	1			1					1627	12974
30	1657	1745	1708	1-	5	1		2	2		9		1647	12974
30	1833	1903	1842	1-	5				1	1	9		1835	12974
30	2002	2018	2006	1-	5				2		2		*	
30	2248	2316	2257	1-	5	1		1	3		4		2252E	12974
31	0200	0322	0219	1-	1				1				0159E	12977
31	1012	1045	1022	1	5	2	1	2	6		2		0955E	12974
31	1127	1135U	1135	1+	5	1	1	2	3		2		NF	
31	1233	1300	1242	1-	3			1	1		1		1225	12977
31	2140	2345	2205	1-	5	1		1	4		9		2138	X-RAY

PERIODS OF NO OBSERVATIONS:

DATE	TIME (UT) and STATION
01-05	0000-1900 A33
01-06	0000-0820 KA
01	0741-0817 UM (16 kHz), 1809-1828 TM, 2000-2400 WS, 2057-2101 UM (16 kHz)
02	0000-1420 WS, 0743-0915 UM (16 kHz)
03-04	0700-0700 A35, 2209-0551 UM (13 kHz)
03-06	0000-2400 A19
03	0347-1143 UM (13 kHz), 0745-0921 UM (16 kHz), 1145-2030 UM (13 kHz), 1358-1639 UM (17 kHz), 1650-1738 UM (17 kHz), 2135-2204 BO
04-20	0615-2007 UM (13 kHz)
04	0723-0840 UM (16 kHz), 2058-2103 UM (13 kHz)
05	0734-0823 UM (16 kHz)
06	0731-0820 UM (16 kHz)
07	0725-0758 UM (16 kHz), 1006-1330 UM (16 kHz), 1426-1432 TM, 1939-1947 UM (17 kHz)
08	0746-0951 UM (16 kHz), 1147-1156 UM (17 kHz), 1348-1353 UM (17 kHz), 1945-1959 UM (17 kHz), 2028-2200 UM (16 kHz)
09	0735-0816 UM (16 kHz), 1145-1158 UM (17 kHz), 1945-1955 UM (17 kHz), 2030-2400 BO
10	0000-1700 BO, 0749-0821 UM (16 kHz), 1145-1158 UM (17 kHz), 1405-1708 UM (17 kHz), 1741-1749 UM (17 kHz)
11-13	0000-2400 A26
11	0730-0915 UM (16 kHz)
12	0741-0927 UM (16 kHz), 2042-2046 UM (16 kHz), 2058-2108 UM (16 kHz)
13	0724-0812 UM (16 kHz)
14	0740-0847 UM (16 kHz), 1007-1354 UM (16 kHz), 1148-1159 UM (17 kHz), 1552-1556 TM
15-17	0000-2400 A29
15	0747-0820 UM (16 kHz), 1558-1608 TM
16-23	0000-2400 A31
16	0747-0818 UM (16 kHz), 1945-1958 UM (17 kHz), 2015-2020 UM (16 kHz), 2030-2034 UM (16 kHz), 2041-2045 UM (16 kHz), 2102-2107 UM (16 kHz), 2112-2115 UM (16 kHz)
17	0430-0508 TM, 0728-0812 UM (16 kHz), 0818-0843 UM (16 kHz), 1405-1730 UM (17 kHz), 1522-1528 TM
18	0717-0812 MA, 0744-0831 UM (16 kHz), 2029-2123 UM (16 kHz)
19	0805-0821 UM (16 kHz), 0834-0837 UM (16 kHz)
20	0745-0825 UM (16 kHz), 1147-1152 UM (17 kHz)
21	0127-0756 UM (13 kHz), 0738-0810 UM (16 kHz), 1010-1222 UM (16 kHz), 1240-1254 UM (16 kHz), 1946-1955 UM (17 kHz), 2058-2101 UM (16 kHz)
22	0740-0743 UM (16 kHz), 0820-0828 UM (16 kHz), 0830-0834 UM (16 kHz), 1128-1200 UM (16 kHz), 1300-2400 MA, 2012-2101 UM (16 kHz), 2020-2130 BO, 2108-2130 UM (16 kHz)
23	0000-0035 MA, 0742-0819 UM (16 kHz), 2100-2102 UM (16 kHz)
24-26	0000-2400 A37
24-27	2200-1500 BO
24-31	0000-2400 A32
24	0038-0252 TM, 0505-1502 WS, 0750-0825 UM (16 kHz), 1403-1630 UM (17 kHz), 1639-1748 UM (17 kHz), 2030-2034 UM (16 kHz), 2039-2153 UM (16 kHz)
25	0742-0819 UM (16 kHz), 1748-1750 TM, 2034-2110 UM (16 kHz), 2115-2118 UM(16 kHz)
26	0750-0804 UM (16 kHz), 0811-0840 UM (16 kHz) 2047-2056 UM (16 kHz)
27	0345-0358 TM, 0749-0825 UM (16 kHz), 2057-2208 UM (16 kHz)
28	0740-0829 UM (16 kHz), 1008-1325 UM (16 kHz), 1700-2400 SC (24 kHz), 2032-2048 UM (16 kHz), 2054-2130 UM (16 kHz)
29	0000-0230 SC (24 kHz), 0630-0948 UM (16 kHz), 1147-1155 UM (17 kHz), 1950-1959 UM (17 kHz), 2030-2040 TM
30	0624-1433 BO, 0745-1122 UM (16 kHz), 1145-1158 UM (17 kHz), 1846-2400 WS, 1945-2000 UM (17 kHz)
31	0000-1745 WS, 0736-0815 UM (16 kHz), 1412-1455 UM (17 kHz), 1530-1759 UM (17 kHz)

SUDDEN IONOSPHERIC DISTURBANCES

MAY 1974

STATIONS REPORTING FOR MAY 1974

AAVSO (A1, A26, A32) (SEA) (A1, A19, A21, A29, A30, A31, A33, A35, A37, A38) (SES) AA31, A38) (SWF)
AREQUIPA (AQ) (SPA)
BOULDER (BO) (SCNA, SEA)
DARMSTADT (DA) (SWF)
DEBRE ZEIT (DE) (SPA)
HANA, MAUI (MU) (SPA)
HAWAII (HA) (SFD)
HERSTMONCEUX (HC) (SEA)
HIRAISO (HI) (SWF)
HOBART (TA) (SEA)
HUANCAYO (HU) (SWF)
INUBO (IN) (SPA)
JOHANNESBURG (JH) (SPA)
KASUAGI (KA) (SPA)
KONA, HAWAII (KN) (SFD)
KUHLUNGSBORN (KU) (SEA, SPA)
MANILA (MA) (SWF, SPA)
MCMATH (MC) (SWF, SCNA)
NATAL (NL) (SPA)
NEUSTRELITZ (NU) (SWF, SCNA)
PANSKA VES (PU) (SEA, SES)
POITIERS (PO) (SFA)
PRESTON (LO) (SEA)
SAO PAULO (UM) (SPA, SFS)
SOFIA (SF) (SES)
ST. CLOUD (SC) (SES)
TABLE MOUNTAIN (TM) (SWF, SPA, LF-SPA)
TORINO (TN) (SPA)
UPICE (UI) (SEA)
WHITE SANDS (WS) (SWF)

SID's BY McMATH REGION

MAY

DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
REGION																															
06	3	4	3	1	1	1	3	2	3		1	1	1																		
12		2																													
18								1																							
68																											2				
70																								1							
72																											1				
74																														10	1
77																															2
X-RAY																														1	1
UNKNOWN		2																							1						
NO FP	1						1																							1	1

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

MAY 1974

MAY 1974	TIMES OF OBSERVATION		STATION	EVENTS													SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND				
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
01	0000	0729	CULG							0000	0051	1					IIIS
	0000	0200	BOUL										0000	0100	1		CONT
			CULG							0017.5	0019	2	0018	0019	1		IIIG
			BOUL							0017.8	0051.3	2	0017.8	0051.3	2		IIIN
	0000	1012	MANI										0018.7	0019.1	1		III
			CULG							0051	0717.5	1					IIIN
			CULG							0137	0139	1					IIIG
			CULG							0232	0236.5	2					IIIGG
			CULG							0255.5	0258	2					IIIGG
			MANI										0256.1	0258.2	3		IIIG
			CULG				0310.5	0311.5	1	0311	0313	1					IIIG,U
			MANI										0311.3	0311.5	2		III
			CULG							0458.5	0507.5	2					IIIGG,U
			CULG							0523.5	0535	1					IIIG
			CULG							0543	0544.5	1					IIIG
			CULG							0545.5	0548	1					IIIG,U
			CULG							0551	0553.5	1					IIIGG
			CULG				0554	0554.5	1	0554	0556	2					IIIGG,V,U
	0445	1757	WEIS							0554.0	0554.8	2					IIIG
			CULG							0613	0614.5	1					IIIG
			CULG							0623	0630.5	2					IIIGG,V,U
			WEIS							0629.5	0630.0	1					IIIG
			WEIS							0630.9	0631.8	2					IIIG
			CULG							0631	0632	2	0631	0632	1		IIIG,V
			WEIS							0813.4	0813.5	1					IIIB
			WEIS							0817.8	0818.0	1					IIIG
			WEIS							0826.2	0826.3	1					IIIB
			WEIS							0943.9	0944.0	1					IIIB
			WEIS							0946.4	0946.8	2					IIIB
			WEIS							0958.7	1006.6	1					IIIGG
	0943	2339	SGMR										1003.3	1006.3	3		IIIG
			WEIS							1010.6	1011	1					IIIG
	1200	2400	BOUL							1225.1	1231.0	2	1225.1	1231.0	2		IIIG
			SGMR										1225.3	1229.1	3	IV	
			WEIS							1225.5	1230.6	1					IIIGG
	0806	1503	DURN							1228.0	1229.7	2					IIIG
			SGMR										1229.9	1230.8	2		IIIG
			SGMR										1256.2	1256.5	2		III
			BOUL							1256.2	1508.6	2	1256.2	1508.6	2		IIIN
			SGMR										1321.7	1322.1	1		III
			WEIS							1329.6	1330.0	2					IIIB
			SGMR										1333.7	1334.1	1		III
			SGMR										1359.8	1400.3	3		III
			SGMR										1407.0	1407.6	1		III
	1246	2245	HARV							1435	1436	3	1435	1436	2		IIIG
			WEIS							1435.4	1436	2					IIIB
			SGMR										1435.5	1436.0	2		III
			HARV				1440	1441	2	1440	1443	3	1440	1443	3		IIIG,V
			SGMR										1440.3	1443.2	3		IIIG
			WEIS							1440.3	1443.2	1					IIIGG
			SGMR										1445.9	1455.4	2		IIIG
			WEIS							1454.6	1454.8	1					IIIB
			BOUL										1638.0	1638.2	1		III
			HARV							1717	2229	2					IIIN
			BOUL							1717.3	2400	2	1717.3	2400	2		IIIN
			SGMR										1717.7	1718.0	1		III
			HARV							1750	1751	3	1750	1751	3		IIIB,V
			SGMR										1750.4	1751.0	2		V
			HARV										1757	2229	1		IIIN
			WEIS							1757.0	1759.0	1					IIIB
			SGMR										1818.8	1826.0	2		IIIG
			HARV							1819		3	1819		3		IIIB
			HARV				1846	1849	2								I
			SGMR										1922.3	1922.6	1		III
	2030	2400	CULG							2030	2400	1					I
			CULG							2040	2400	1					IIIS
			HARV							2047	2204	1					IN
			HARV							2049	2050	1	2049	2050	1		IIIG
			CULG							2049	2050	1					IIIG,U
			SGMR										2049.2	2058.2	2		IIIG
			CULG				2057	2058	1	2056	2058.5	2	2057.5	2058	1		IIIG,V,U
			HARV							2057	2058	3	2057	2058	3		IIIG,V
			BOUL							2101	2400	1	2101	2400	1		CONT
			SGMR										2147.9	2148.8	1		III
			CULG							2157.5	2200.5	2					IIIG,U
			HARV							2158	2200	2	2158	2200	2		IIIG
			CULG							2215.5		1					IIIG
			CULG							2224	2225	2					IIIG
			SGMR										2224.1	2224.4	1		III
			CULG							2226.5	2229.5	1	2228	2229	1		IIIG
			CULG							2251.5	2253.5	3	2251.5	2253	2		IIIG,V,U
	2137	2400	MANI										2251.6	2252.4	3		III
			SGMR										2251.7	2252.5	1		III
			CULG							2335	2337	2	2336	2337	1		IIIG,U
			MANI										2335.9	2336.2	2		III
			CULG							2356	2400	1					IIIG,U
02	0000	0729	CULG							0000	0001	1					IIIG,U
			CULG							0000	0140	1					IIIS
			BOUL							0000	0146	1	0000	0146	1		IIIN

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

MAY 1974

MAY 1974	TIMES OF OBSERVATION		STATION	EVENTS													SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND				
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.		
02	0000	0200	BOUL										0000	0146	1		CONT
	0000	1012	MANI										0000.1	0000.5	1		III
			CULG							0031.5	0037.5	1					IIIGG,U
			CULG							0044	0046	1					IIIG
			CULG							0140	0430						IIIS,W
			CULG							0143 .	0144	2					IIIG,U
			MANI										0143.4	0146.5	3		IIIG
			CULG							0144.5	0147	2	0144.5	0147	2		IIIG,V
			MANI										0219.8	0221.7	1		IIIG
			CULG				0221	0222	1	0219	0222.5	2	0220	0222.5	1		IIIGG
			CULG							0257	0258	2					IIIG,U
			CULG							0304	0304.5	2					IIIG
			CULG							0314	0315	1					IIIG,V
			CULG							0358	0359	1	0358.5	0359	1		IIIG
			MANI										0358.7	0359.0	3		III
			CULG							0416	0418.5	2					IIIGG
			MANI										0416.0	0417.3	1		III
			CULG							0426	0427	2					IIIG,V,U
			MANI										0426.0	0426.7	1		IIIG
			CULG							0519	0521	2					IIIG,U
			MANI										0519.3	0519.6	1		III
	0446	1758	WEIS							0519.5	0520.0	1					IIIG
			CULG							0524	0525.5	2	0524	0525	1		IIIG
			MANI										0524.3	0524.8	2		III
			WEIS							0524.4	0525.5	2					IIIGG
			CULG							0636		2					IIIB
			WEIS							0636.0	0636.2	1					IIIB
			CULG							0641	0646	2					IIIGG,V,U
			WEIS							0641.5	0642.5	1					IIIG
			WEIS							0644.4	0646	1					IIIB
			WEIS							0741.5	0742.2	1					IIIG
	0805	1503	DURN														
			WEIS							0936.2	0937.1	2					IIIGG
			WEIS							0938.6	0938.8	1					IIIB
			WEIS							1109.2	1109.5	1					IIIG
	0941	2340	SGMR										1109.2	1109.5	1		III
	1200	2400	BOUL							1220	1512.2	1	1220	1512.2	1		CONT
			BOUL							1233.1	1512.2	1	1233.1	1512.2	1		IIIN
			SGMR										1233.3	1233.8	1		III
			WEIS							1345.5	1345.7	1					IIIB
			SGMR										1345.8	1356.8	1		IIIG
			WEIS							1346.2	1346.3	1					IIIG
	1246	2245	HARV							1413	1520	1					I
			BOUL							1427	1512.2	1					IS
			SGMR										1453.3	2305.9	2		CONT
			WEIS							1453.5	1644	2					IIIS
			HARV							1455	1501	2	1457	1501	2		IIIGG
			BOUL							1512.2	1650	3	1512.2	1650	3		CONT
			BOUL							1512.2	1957	2					IS
			HARV							1517	1614	2	1517	1614	2		IIIS
			HARV							1519	1525	2					I
			HARV							1534	1539	2	1534	1539	2		UNCL
			HARV							1557	1600	2	1557	1600	2		UNCL
			HARV							1617	1822	1	1617	1822	1		IIIN
			HARV							1630	1639	2	1630	1639	2		IIIGG
			BOUL							1650	1959	2	1650	1959	2		CONT
			HARV							1743	1753	1	1743	1753	1		IIIGG,RSDP
			HARV							1831	1931	2	1831	1931	2		IIIS
			HARV							1900	1947	1					I
			HARV							1932	2224	1	1932	2224	1		IIIN
			HARV				1933	1935	2	1933	1935	2					IIIGG
			HARV				1939	1940	2	1939	1940	2					IIIG
			HARV							1951	1953	3	1951	1953	3		IIIGG,V
			BOUL							1957	2200	1					IS
			BOUL							1959	2400	1	1959	2400	1		CONT
	2030	2400	CULG							2037	2400	2					IS
			CULG							2040	2400	2					IIIS
			CULG							2105.5	2400	2					S,DP
	2136	2400	MANI														
03			BOUL							0000	0133.1	1	0000	0133.1	1		IIIN
	0000	0200	BOUL							0000	0140.0	1	0000	0140.0	1		CONT
			CULG							0000	0722	1					IIIS
			CULG							0000	0722	1					N,DP
	0000	0722	CULG							0000	0722	1					IS
	0000	1012	MANI										0132.2	0132.4	2		III
			CULG							0132.5		2	0132.5		2		IIIB
			CULG							0149.5	0152.5	1					IIIGG
			CULG							0157.5		1					IIIB
			CULG							0202	0203.5	2					IIIG,U
			CULG				0211	0214	2	0211	0217	2	0211	0215.5	2		IIIGG,V,U
			MANI										0211.0	0216.4	3		CONT
			CULG							0226			0226		1		IIIB
			CULG							0239.5	0243	2	0241.5	0242	1		IIIGG
			MANI										0240.5	0242.4	1		IIIG
			CULG							0249	0250	2					IIIG
			CULG							0310	0311	2					IIIG,U
			CULG							0340		2					IIIB
			CULG							0358.5	0401	2					IIIGG,U
			MANI										0359.1	0400.4	2		III

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

MAY 1974

MAY 1974	TIMES OF OBSERVATION		STATION	EVENTS												SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
03	0448	1803	WEIS							0515.5	0518.5	3				IIIGG
			MANI										0515.7	0518.4	3	IIIG
			CULG				0516	0518.5	1	0515	0518	3	0516	0517	1	IIIGG,V,U
			WEIS							0516.7	0516.9	3				IIIU
			CULG							0633.5	0635.5	2				IIIG
			WEIS							0633.8	0634	1				IIIB
			CULG				0701	0701.5	1	0700.5	0702	3	0701	0702	1	IIIG
	0631	1341	DURN							0701.2	0701.2	1				IIIB
			WEIS							0701.3	0701.9	3				IIIGG
			MANI										0701.3	0701.7	3	III
			CULG				0704.5	0705	1	0704.5	0705	2				IIIG,V
			WEIS							0704.6	0704.7	1				IIIB
			WEIS							0928.3	0929.0	1				IIIGG
			WEIS							0949.8	0950	1				IIIB
			WEIS							1155.2	1155.5	2				IIIB
	0940	2341	SGMR										1155.3	1155.6	2	III
	1200	2400	BOUL										1224	2330.0	1	CONT
			BOUL							1241.7	2330.0	2	1241.7	2330.0	2	IIIN
			WEIS							1242	1242.9	2				IIIGG
			SGMR										1242.1	1246.9	2	IIIG
			SGMR										1311.1	1311.5	1	III
			SGMR										1400.0	1401.7	3	IIIG
	1245	2245	HARV				1401	1402	2	1400	1402	3	1400	1402	3	IIIG
			SGMR										1403.7	1406.6	1	IIIG
			HARV							1405	1407	1				IIIG
			WEIS							1405.8	1406.4	1				IIIGG
			SGMR										1415.8	1417.0	1	IIIG
			HARV							1456	1457	3	1456	1457	3	IIIGG
			SGMR										1456.1	1457.1	2	III
			WEIS							1456.2	1456.2	2				IIIGG
			SGMR										1503.8	1504.2	1	III
			HARV							1504	2115	2	1504	2115	2	IIIN
			SGMR										1523.0	1533.5	1	IIIG
			SGMR										1658.2	1658.4	2	III
			HARV							1737	1746	2	1737	1746	2	IIIGG
			SGMR										1740.0	1743.0	2	IIIG
			WEIS							1742.3	1742.6	2				IIIGG
			HARV							1811	1812	3	1811	1812	3	IIIGG
			SGMR										1811.1	1812.6	2	III
			HARV							1821	1824	1	1821	1824	1	IIIGG
			HARV							1825	1830	3	1825	1830	3	IIIGG
			SGMR										1825.3	1845.2	2	IIIG
			HARV							1848	1849	2	1848	1849	2	IIIG
			HARV				1925	1927	3	1925	1927	2				IC
			SGMR										1940.2	2017.2	2	IIIG
			HARV							2000	2002	2	2001	2002	2	IIIG
	2030	2400	CULG							2030	2330	1				IS
			CULG							2043	2330	1				IIIS
			CULG							2056	2356	1				N,DP
			CULG				2117.5	2122.5	1	2117.5	2125.5	2				IIIGG
			BOUL							2117.8	2124.6	3	2117.8	2124.6	3	IIIGG
			HARV							2118		3	2118		3	IIIG
			HARV							2118	2124	1				I
			SGMR										2118.2	2124.2	2	IIIG
			HARV							2120	2124	2	2120	2124	2	IIIGG
			CULG							2257	2300	2				IIIGG
	2136	2400	MANI										2257.3	2305.6	2	IIIG
			BOUL							2257.3	2259.5	3	2257.3	2259.5	3	IIIG
			BOUL							2301.4	2307.4	2	2301.4	2307.4	2	IIIGG
			CULG							2301.5	2307.5	2				IIIGG
			CULG							2330	2400	2				IS
			CULG							2330	2400	2				IIIS
			BOUL							2330.0	2400	3	2330.0	2400	3	IV
			MANI										2343.8	2350.0	1	III
04	0000	0200	BOUL							0000	0043	1	0000	0043	1	CONT
			CULG							0000	0340	1				IIIS
	0000	0726	CULG							0000	0651	1				IS
			CULG							0009	0332	1				N,DP
			CULG							0042.5	0045	2				IIIG
			BOUL							0042.9	0133.3	2	0042.9	0133.3	2	IIIN
	0000	1812	MANI										0042.9	0043.1	1	III
			CULG							0059	0114	2				IIIGG
			CULG				0225.5	0227.5	1	0224	0228	2	0225.5	0227	1	IIIGG
			MANI										0225.5	0226.5	3	III
			CULG							0309.5	0332	2				IIIGG
			MANI										0309.7	0313.5	2	IIIG
			MANI										0323.9	0329.9	3	IIIG
			CULG							0324	0326	2	0324.5	0325.5	1	IIIG
			CULG				0329	0329.5	1	0329	0330.5	2	0329	0330	1	IIIG
			CULG							0348	0723	1				IIIN
	0438	1806	WEIS							0617.4	0617.6	2				IIIGG
			CULG				0617.5	0618	1	0616.5	0619	2				IIIG
			MANI										0617.6	0619.7	3	IIIG
			CULG				0619	0619.5	1	0619	0621	2				IIIG,U
			WEIS							0619.4	0619.8	2				IIIGG
			CULG							0626	0629	2				IIIGG
			WEIS							0626.7	0628.4	2				IIIGG
			CULG							0632.5	0635	2				IIIGG
			WEIS							0633.3	0634.4	2				IIIGG

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MAY 1974	TIMES OF OBSERVATION		STATION	EVENTS												SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
04			MANI										0633.8	0634.5	3	III
	0638	1620	DURN													
			CULG							0642	0643	1				IIIG
			WEIS							0642.3	0645	1				IIIGG
			WEIS							0720.4	0722.4	2				IIIGG
			MANI										0722.5	0722.7	1	III
			WEIS							0725.3	0727.4	2				IIIGG
			WEIS							0736.5	0736.9	2				IIIGG
			WEIS							0738.5	0738.8	3				IIIGG
			MANI										0738.6	0738.9	3	III
			WEIS							0939.4	0939.5	1				IIIB
			WEIS							0944.2	0944.7	2				IIIGG
	1200	2400	BOUL							1233.2	2200	2	1233.2	2200	2	IIIN
			WEIS							1258.5	1258.7	1				IIIB
	0939	2342	SGMR										1258.5	1306.4	1	IIIG
			WEIS							1302.5	1302.7	1				IIIB
			SGMR										1400.5	1404.4	2	IIIG
	1246	2245	HARV							1403	1404	2	1403	1404	2	IIIG
			WEIS							1403.8	1404.4	2				IIIGG
			HARV							1559	1850	2	1559	1850	2	IIIN
			SGMR										1622.2	1622.5	1	III
			BOUL							1652.1	1717.2	2	1652.1	1717.2	2	CONT
			SGMR										1653.6	1711.3	1	IIIG
			BOUL							1840	1950	2	1840	1950	2	CONT
			HARV							1859	1935	2	1859	1935	2	IIIS
			HARV							1909	1910	3	1909	1910	3	IIIG
			SGMR										1909.6	1909.8	2	III
			BOUL										1950	2040	1	CONT
	2029	2400	CULG							2118	2351.5	1				IIIN
	2134	2400	MANI													
			CULG							2202	2203.5	1				IIIG
			BOUL							2202.2	2203.0	2	2202.2	2203.0	2	IIIG
			BOUL							2210.5	2210.9	2	2210.5	2210.9	2	III
			CULG							2210.5	2211.5	1				IIIG
			CULG							2215	2215.5	1				IIIG
			BOUL							2215.3	2215.9	2	2215.3	2215.9	2	III
			SGMR										2216.3	2216.5	1	III
			BOUL							2218.7	2219.1	2	2218.7	2219.1	2	III
			CULG							2309	2310	1				IIIG
			BOUL							2309.5	2309.9	2	2309.5	2309.9	2	IIIG
			BOUL							2313.6	2314.2	2	2313.6	2314.2	2	IIIG
			BOUL										2355.6	2355.8	1	III
05	0000	1010	MANI													
	0000	0728	CULG							0022	0630	1				IIIN
	0000	0200	BOUL							0107.8	0108.0	1	0107.8	0108.0	1	III
			CULG							0113.5	0115	1				IIIGG
			BOUL							0113.6	0115.2	1	0113.6	0115.2	1	IIIG
			BOUL										0126.6	0126.8	1	III
			CULG							0350	0728	1				I,CONT
	0436	1848	WEIS							0521.8	0521.9	1				IIIB
			CULG							0522		2				IIIB
			CULG							0539	0541	1				IIIG
			WEIS							0539.4	0539.6	1				IIIB
			CULG							0611.5		1				IIIB,U
	0638	0706	DURN													
			CULG							0647	0728	1				IIIS
			WEIS							0714.4	0715.3	1				IIIGG
	0933	1609	DURN													
	0937	2343	SGMR										1036.9	1049.3	1	IIIG
	1200	1400	BOUL							1220	1400	1				IS
			BOUL										1252.8	1253.1	2	III
			SGMR										1531.2	1534.5	1	IIIG
	1700	2400	BOUL							1700	2400	2				IS
			BOUL							1716.3	1716.9	1	1716.3	1716.9	1	IIIG
	1245	2250	HARV							1808	1810	3	1808	1810	3	IIIG
			BOUL							1808.4	1810.0	2	1808.4	1810.0	2	IIIG
			SGMR										1808.7	1809.1	2	III
			BOUL										1846.6	1859.5	1	CONT
			BOUL							1920	2025	2	1920	2025	2	CONT
			HARV							1924	1945	2	1924	1945	2	IIIS
			SGMR										1925.8	1939.0	1	CONT
			HARV							1950	2010	1	1950	2010	1	IIIN
			HARV							2016	2018	2	2016	2018	2	IIIG
			BOUL							2016.6	2018.2	2	2016.6	2018.2	2	IIIG
			SGMR										2017.2	2017.4	1	III
	2030	2110	CULG							2041	2110	1				I,CONT
	2135	2400	MANI													
	2215	2400	CULG							2215	2400	1				I,CONT
			CULG							2352.5		1				IIIB
06	0000	0729	CULG							0000	0713	1				IS
	0000	0200	BOUL							0000	0130	1				IS
			CULG							0011	0435.5	1				IIIN
			BOUL										0011.4	0011.6	1	III
			BOUL							0025	0130	1	0025	0130	1	CONT
			CULG							0127		2				IIIB
			CULG							0412	0414	2				IIIGG
			CULG							0443	0709	1				IIIS
			CULG				0531.5	0534	2	0531.5	0534	2				IIIGG

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MAY 1974	TIMES OF OBSERVATION		STATION	EVENTS												SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
06	0438	1743	WEIS							0531.8	0534.8	1				IIIGG
			CULG							0622.5	0626	1				IIIG,U
			WEIS							0622.9	0623.5	1				IIIGG
			WEIS							0625.3	0625.6	1				IIIGG
	0000	1009	MANI										0625.6	0625.8	1	III
	0638	1619	DURN													
			WEIS							0814.5	0816.5	1				IIIGG
			MANI										0814.7	0815.1	1	III
			WEIS							1109	1109.7	1				IIIGG
	0936	2344	SGMR										1109.1	1109.8	1	III
	1200	2400	BOUL										1216.5	1217.7	1	IIIG
			SGMR										1217.1	1224.4	2	IIIG
			BOUL							1224.1	1224.8	1	1224.1	1224.8	1	III
			WEIS							1224.2	1224.4	1				IIIB
			BOUL							1230	1820	1				IS
			BOUL										1239.5	1230.7	1	IIIG
			SGMR										1240.6	1240.8	1	III
			BOUL										1356.4	1356.7	1	III
			BOUL							1420.7	1423.9	2	1420.7	1423.9	2	IIIG
	1246	2245	HARV							1421	1429	2	1421	1426	2	IIIGG
			WEIS							1421.0	1423.2	2				IIIGG
			SGMR										1421.2	1423.1	3	IIIG
			SGMR										1425.2	1429.3	2	IIIG
			WEIS							1425.2	1425.7	1				IIIGG
			BOUL							1425.3	1426.7	2	1425.3	1426.7	2	IIIG
			BOUL							1428.1	1429.7	2	1428.1	1429.7	2	IIIG
			BOUL							1433.3	1433.6	1	1433.3	1433.6	1	III
			WEIS							1531.9	1532.2	1				IIIB
			SGMR										1531.9	1543.4	2	IIIG
			HARV							1532	1928	2	1532	1928	2	IIIN
			WEIS							1534.6	1535.1	1				IIIGG
			BOUL							1536.5	1954.0	2	1536.5	1954.0	2	IIIN
			WEIS							1542.9	1543.4	1				IIIGG
			SGMR										1715.0	1715.2	1	III
			HARV							1739	1740	3	1739	1740	3	IIIG
			SGMR										1739.0	1740.5	2	III
			HARV							1808	1810	3	1808	1810	3	IIIGG
			SGMR										1808.1	1809.8	2	IIIG
			HARV							1824	1832	3	1824	1832	3	IIIGG
			SGMR										1824.2	1831.2	2	III
			HARV							1842		3	1842		3	IIIG
			SGMR										1842.2	1923.4	2	IIIG
			HARV							1846		3	1846		3	IIIB
			HARV							1858	1901	2	1858	1901	2	IIIG
			HARV							1919	1921	2	1919	1921	2	IIIG
			SGMR										1946.5	1954.1	2	IIIG
			HARV							1947	1954	3	1947	1954	3	IIIGG
			BOUL										2023.6	2024.0	1	III
			HARV				2029	2031	1							I
	2029	2400	CULG							2045	2349	1				IIIN
			BOUL										2057.0	2103.0	1	CONT
			BOUL							2130.7	2400	2	2130.7	2400	2	IIIN
			CULG							2216	2218.5	2				IIIGG
			HARV							2217	2218	1	2217		1	IIIG
			SGMR										2220.5	2221.2	1	III
			SGMR										2254.8	2259.8	1	IIIG
			CULG							2259	2300.5	2				IIIG
	2135	2400	MANI										2259.4	2259.8	1	III
			CULG							2302	2305	1				IIIG
			CULG							2314	2315	2	2314	2315	1	IIIGG
			SGMR										2314.3	2314.7	1	III
			MANI										2314.4	2314.6	3	III
			CULG							2340	2341.5	2	2340.5	2341.5	1	IIIG
			MANI										2340.5	2341.0	3	III
			SGMR										2340.8	2341.8	1	III
07	0000	0200	BOUL							0000	0129.0	2	0000	0129.0	2	IIIN
	0000	0728	CULG							0000	0643.5	1				IIIN
			CULG							0011.5	0012	2				IIIG
	0000	1009	MANI										0011.8	0012.0	1	III
			MANI										0124.8	0125.8	2	III
			CULG				0125	0125.5	1	0124.5	0126	2				IIIGG
			CULG							0200.5	0203	2	0200.5	0201.5	1	IIIG
			MANI										0200.7	0201.1	2	III
			CULG							0226.5		2				IIIB
			MANI										0226.6	0226.8	1	III
			MANI										0246.4	0246.8	1	III
			CULG							0246.5		2				IIIB
			CULG							0525		2				IIIB
			MANI										0526.1	0526.2	3	III
			CULG							0531	0533.5	1				IIIG
			MANI										0531.7	0532.1	3	III
			CULG							0552.5		1				IIIB
	0638	1620	DURN													
			CULG							0658.5	0702	1				IIIGG
			CULG							0704.5	0706	1				IIIG
			MANI										0705.5	0705.6	1	III
	1014	1839	WEIS							1048.5	1049.5	1				IIIG
	0935	2345	SGMR										1048.6	1049.7	1	IIIG
			WEIS							1105.5	1106.5	1				IIIG

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MAY 1974	TIMES OF OBSERVATION		STATION	EVENTS												SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
07			SGMR										1113.2	1121.3	2	IIIG
			WEIS							1116.2	1116.6	2				IIIGG
			WEIS							1121.0	1121.3	1				IIIB
			SGMR										1143.9	1144.1	1	III
			WEIS							1144.0	1144.1	1				IIIB
			WEIS							1147.2	1147.5	2				IIIB
			SGMR										1147.4	1147.6	2	III
			WEIS							1149.2	1152.7	2				IIIGG
			SGMR										1149.9	1152.7	2	IIIG
	1200	2400	BOUL							1252.8	2350	3	1252.8	2350	3	IIIN
			SGMR										1253.1	1318.1	2	IIIG
			WEIS							1253.2	1253.8	1				IIIGG
			WEIS							1258.7	1303.0	2				IIIGG
	1246	2245	HARV							1259	1300	1	1259	1300	1	IIIG
			WEIS							1304.5	1305.4	1				IIIGG
			WEIS							1317.5	1318.2	1				IIIGG
			SGMR										1337.7	1337.9	1	III
			SGMR										1414.3	1442.5	1	IIIG
			SGMR										1523.2	1742.1	2	IIIG
			HARV							1531	2007	2	1531	2007	2	IIIN
			WEIS							1531.0	1740.0	2				IIIS
			HARV							1537	1540	2	1537	1540	2	IIIGG
			HARV							1551	1554	2	1551	1554	2	IIIG
			HARV							1600	1602	3	1600	1602	3	IIIG
			HARV							1615	1617	2	1615	1617	2	IIIG
			HARV							1639	1643	3	1639	1643	3	IIIGG
			HARV							1718	1721	3	1718	1721	3	IIIGG
			HARV							1727		3	1727		3	IIIB
			HARV							1731	1732	2	1731	1732	2	IIIG
			HARV							1739	1742	2	1739	1742	2	IIIG
			HARV							1806	1818	3	1806	1819	3	IIIGG
			SGMR										1807.5	1941.2	3	IIIG
			HARV							1843	1844	3	1843	1844	3	IIIB
			HARV							1928	1938	3	1928	1939	3	IIIGG
			SGMR										2006.6	2007.0	1	III
			CULG							2029	2352	1				IIIN
	2029	2400	CULG							2054	2058.5	1				IIIGG
			HARV							2054	2057	2	2054	2057	2	IIIGG
			SGMR										2054.2	2057.5	1	IIIG
			CULG							2203	2204	1				IIIG
			CULG							2220	2225	2	2220	2221.5	1	IIIGG
			HARV							2220	2223	3	2220	2223	3	IIIGG
			SGMR										2220.6	2222.8	2	IIIG
	2135	2400	MANI										2220.6	2220.9	2	III
			CULG							2248.5	2251	1				IIIGG,U
			SGMR										2249.4	2249.8	1	III
			CULG							2310	2314	2				IIIG,U
			MANI										2310.5	2313.4	2	IIIG
			SGMR										2312.5	2313.2	1	III
			CULG							2343	2344	1				IIIG
			MANI										2343.0	2343.3	3	III
08	0000	0728	CULG							0000	0722	1				IIIN
	0000	0200	BOUL										0019.8	0019.9	1	III
			CULG							0022	0024	1	0023	0023.5	1	IIIG
	0000	1009	MANI										0023.1	0023.5	2	III
			BOUL							0035.3	0037.7	2	0035.3	0037.7	2	IIIG
			MANI										0042.5	0049.0	3	IIIG
			CULG							0042.5	0050	2	0042.5	0045.5	2	IIIGG
			BOUL										0045.5	0047.5	1	IIIG
			CULG							0135	0138	1	0135.5	0137	1	IIIG
			MANI										0136.3	0136.9	3	III
			CULG							0145	0148.5	1	0145.5	0146	1	IIIGG
			MANI										0145.6	0147.4	2	IIIG
			MANI										0156.1	0156.3	1	III
			CULG							0200.5	0202.5	2	0200.5	0202	1	IIIGG
			MANI										0200.7	0202.5	2	IIIG
			CULG							0242.5	0248	2	0242.5	0247.5	2	IIIGG
			MANI										0242.6	0247.3	3	IIIG
			CULG							0243.5	0245	3	0244	0245	2	IIIG
	0430	0600	WEIS													
			CULG							0521	0522	1				IIIG
			CULG							0623	0624	1				IIIG
	0638	1619	DURN													
			MANI										0721.1	0721.8	3	III
			MANI										0732.5	0733.8	1	III
			MANI										0738.6	0739.1	3	III
	0740	1811	WEIS							0918.5	1156.0	2				IIIS
	0934	2346	SGMR										1039.3	1039.7	2	III
			WEIS							1058.2	1101.0	3				IIIGG
			SGMR										1058.7	1102.0	2	IIIG
			SGMR										1125.9	1129.0	2	IIIG
			SGMR										1152.9	1155.9	1	IIIG
			SGMR										1208.0	1208.2	1	III
	1200	2400	BOUL										1221.6	1225.0	1	IIIG
			BOUL							1305.1	1633.7	2	1305.1	1633.7	2	IIIN
			WEIS							1305.8	1307.0	2				IIIGG
	1245	2250	HARV							1306	1307	2	1306	1307	1	IIIG
			SGMR										1306.0	1325.8	2	IIIG
			HARV							1309	1310	3	1309	1310	1	IIIG

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

MAY 1974

MAY 1974	TIMES OF OBSERVATION		STATION	EVENTS												SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
08			WEIS							1309.3	1309.9	2				IIIGG
			SGMR										1405.3	1407.2	2	III
			HARV							1406	1407	2	1406	1407	1	IIIG
			WEIS							1406.5	1406.8	1				IIIG
			SGMR										1514.7	1517.6	2	IIIG
			HARV							1515	1518	3	1515	1518	3	IIIG
			WEIS							1517.0	1517.5	2				IIIG
			WEIS							1549.8	1550.6	3				IIIG
			HARV							1550	1551	3	1550	1551	3	IIIG,V
			SGMR										1550.0	1551.3	2	V
			SGMR										1601.0	1604.1	1	IIIG
			HARV							1609	1726	2	1609	1722	2	IIIN
			WEIS							1609.5	1609.6	1				IIIB
			WEIS							1630.8	1630.9	1				IIIB
			WEIS							1633.5	1633.7	1				IIIB
			BOUL							1721.8	1724.4	1	1721.8	1724.4	1	IIIGG
			HARV							1839	1841	2				IIIG
			BOUL										2021.5	2021.7	1	III
	2029	2400	CULG							2039.5	2352	1				IIIN
			SGMR										2039.6	2040.0	1	III
			BOUL							2039.7	2040.0	1	2039.7	2040.0	1	III
			CULG							2047	2218.5					IN,M
			BOUL							2131.5	2250	1				IS
	2134	2400	MANI													
			BOUL							2153	2350	1	2153	2350	1	CONT
09	0000	0728	CULG							0004.5	0856.5	1				IIIN
	0000	0200	BOUL							0027.7	0028.8	1	0027.7	0028.8	1	III
			BOUL							0032.3	0033.6	1	0032.3	0033.6	1	IIIG
			BOUL										0033	0055	1	CONT
			BOUL							0035.1	0036.1	1	0035.1	0036.1	1	III
			BOUL							0038.0	0038.5	1	0038.0	0038.5	1	III
			BOUL							0044.5	0046.0	1	0044.5	0046.0	1	IIIG
			CULG							0218.5	0232	1				IIIGG
			CULG							0223	0225	1				IIIG
	0000	1009	MANI										0223.4	0224.5	1	IIIG
			CULG							0308	0309.5	1				IIIG
			MANI										0308.0	0308.5	1	III
			CULG							0408	0421	2	0409.5	0418.5	1	IIIGG
			MANI										0409.4	0420.5	3	IIIG
			CULG							0451.5	0453	1				IIIG
			MANI										0452.2	0452.9	1	III
			CULG							0526.5	0710					IW
			CULG							0544	0545	1				IIIG
			CULG							0614	0629	1				IIIGG
	0638	1620	DURN													
			CULG							0643.5	0645	1				IIIG
			CULG							0648.5	0653	2				IIIGG
	0424	1803	WEIS							0649.0	0652.0	2				IIIGG
			MANI										0651.3	0651.5	2	III
			WEIS							0721.0	0721.2	1				IIIB
			WEIS							0824.0	0826.8	2				IIIGG
			MANI										0824.6	0825.5	1	III
			WEIS							0829.5	0829.8	2				IIIGG
			WEIS							1039.2	1046.9	3				IIIGG
	0932	2348	SGMR										1039.4	1047.1	2	IIIG
	1200	2400	BOUL							1258.5	1259.0	3	1258.5	1259.0	3	IIIG
			WEIS							1258.7	1300.0	3				IIIGG
			SGMR										1258.8	1302.0	3	V
	1246	2245	HARV							1259	1300	3	1259	1300	1	IIIG
			BOUL										1305.6	1306.2	1	III
			BOUL										1307.5	1307.6	1	III
			SGMR										1309.8	1311.3	1	III
			BOUL							1310.0	1310.6	1	1310.0	1310.6	1	III
			BOUL										1347.5	1347.6	1	III
			BOUL							1408.8	1415.0	3	1408.8	1415.0	3	III
			SGMR										1409.6	1414.0	3	V
			HARV							1410	1412	3	1410	1412	3	IIIGG
			WEIS							1410.0	1415.5	2				IIIGG
			HARV							1415	1417	2	1416		2	IIIGG
			BOUL							1415.5	1416.6	2	1415.5	1416.6	2	III
			SGMR										1415.7	1416.3	2	III
			HARV							1510	1512	3	1510	1512	3	IIIG,V
			BOUL							1510.2	1512.8	2	1510.2	1512.8	2	III
			WEIS							1510.4	1511.6	1				IIIGG
			SGMR										1510.4	1512.2	2	V
			BOUL							1528.9	1529.6	2	1528.9	1529.6	2	III
			SGMR										1529.3	1529.7	1	III
			BOUL							1604.4	1605.0	1	1604.4	1605.0	1	III
			SGMR										1614.5	1615.2	1	III
			BOUL							1614.6	1615.0	2	1614.6	1615.0	2	III
			BOUL							1623.0	1628.9	3	1623.0	1628.9	3	III
			WEIS							1623.5	1625.8	3				III,V
			SGMR										1623.6	1626.8	3	V
			HARV				1624	1625	2	1623	1626	3	1623	1626	3	IIIGG,V
			BOUL							1633.8	1634.5	3	1633.8	1634.5	3	III
			HARV							1634	1637	3	1634	1635	3	IIIG
			WEIS							1634.5	1634.7	2				IIIGG
			SGMR										1634.5	1635.2	2	III
			SGMR										1648.9	1649.2	1	III

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MAY 1974

MAY 1974	TIMES OF OBSERVATION		STATION	EVENTS												SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
09			BOUL							1658.3	1659.5	1	1658.3	1659.5	1	IIIG
			BOUL							1729.4	1729.9	1	1729.4	1729.9	1	IIIG
			BOUL										1750.5	1750.7	1	III
			BOUL							1849.3	1853.5	2	1849.3	1853.5	2	III
			SGMR										1849.8	1850.6	2	III
			HARV							1850		3	1850		3	IIIG
			BOUL										1905.5	1906.6	2	III
			BOUL							1932.9	1933.9	2	1932.9	1933.9	2	III
			SGMR										1933.3	1934.0	1	III
			HARV							1954	1955	2				IIIG,U
			SGMR										1954.1	1954.8	1	III
			BOUL							1954.1	1955.0	2	1954.1	1955.0	2	III
	2029	2400	CULG							2117.5	2118.5	1				IIIG
			BOUL							2117.7	2118.8	2	2117.7	2118.8	2	III
			SGMR										2117.8	2132.2	2	IIIG
			CULG							2120.5	2124.5	1				IIIG,U
			BOUL							2123.6	2123.9	2	2123.6	2123.9	2	III
			CULG							2130	2132.5	2				IIIGG,U
			HARV							2130	2132	2	2130	2132	2	IIIGG
			BOUL							2130.3	2132.4	2	2130.3	2132.4	2	III
			CULG							2152	2311	1				IIIN
			CULG							2243.5	2252	2	2243.5	2247	1	IIIGG,V,U
			BOUL							2243.7	2247.7	3	2243.7	2247.7	3	IIIG
			SGMR										2243.8	2246.9	2	III
	2133	2400	MANI										2243.8	2246.6	3	III
			HARV							2244	2245	3	2244	2245	3	IIIGG,V
			BOUL							2248.9	2249.0	1	2248.9	2249.8	1	III
10	0000	1009	MANI													
	0426	1813	WEIS													
	0000	0728	CULG							8538		1				IIIB
			CULG							0551	0552	1				IIIG
			CULG							0601	0602	1				IIIG
			CULG							0612	0613	1				IIIG
	0638	1543	DURN													
	0000	0200	BOUL										0759.0	0759.4	1	III
	1200	2400	BOUL										1244.4	1244.5	1	III
	1246	2250	HARV													
			BOUL										1314.8	1315.0	1	III
			BOUL										1316.5	1317.2	1	III
			BOUL										1434.5	1434.8	1	III
			BOUL										1528.1	1528.5	1	III
			BOUL							1623.8	1625.0	1	1623.8	1625.0	1	III
			BOUL							1730.5	1730.8	1	1730.5	1730.8	1	III
	0931	2349	SGMR										1730.7	1730.9	1	III
	2029	2247	CULG													
	2132	2400	MANI													
	2257	2400	CULG							2340	2341.5	1				IIIG
			BOUL							2341.0	2341.5	1	2341.0	2341.5	1	III
			CULG							2346	2349	1				IIIG,U
11	0000	0200	BOUL													
	0000	0728	CULG							0114.5	0513	1				IIIN
			CULG							0205	0212	1	0209	0212	1	IIIGG
			CULG				0217.5	0219	1	0215	0220.5	1	0218.5	0219.5	1	IIIGG
			CULG							0344.5	0347	1				IIIG
	0000	1007	MANI										0346.1	0346.5	1	III
			CULG				0348.5	0349	1	0348.5	0350	1				IIIG
			CULG							0559.5	0602	1				IIIG
	0426	1610	WEIS							0631.4	0633.6	2				IIIGG
			CULG				0631.5	0633.5	1	0631	0633.5	1				IIIGG,U
	0930	2350	SGMR													
	1246	2245	HARV													
	1616	1814	WEIS													
	1200	2400	BOUL										1844.4	1844.5	1	III
	2029	2400	CULG													
			BOUL										2034.5	2034.6	1	III
	2132	2400	MANI													
12	0000	1007	MANI													
	0000	0200	BOUL													
	0000	0728	CULG													
	0428	1815	WEIS													
	0929	2351	SGMR													
	1130	1500	BOUL													
	1246	2245	HARV				1728	1729	2	1728	1729	2				IIIG
	1800	2400	BOUL													
	2029	2400	CULG							2118	2118.5	1				IIIB,U
	2132	2400	MANI													
13	0000	1007	MANI													
	0000	0728	CULG													
	0000	0200	BOUL													
	0429	0831	WEIS							0613.3	0613.4	1				IIIB
	0836	1053	WEIS													
	0928	2352	SGMR										1202.0	1211.2	2	IIIG
	1130	1700	BOUL							1208.0	1214.3	1	1208.0	1214.3	1	IIIG
	1056	1819	WEIS							1208.3	1211.5	1				IIIGG
			WEIS							1553.7	1553.8	1				IIIB
	2029	2400	CULG							2047.5						IIIB,W

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MAY 1974	TIMES OF OBSERVATION		STATION	EVENTS													SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND				
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
13			CULG							2103	2157	1				IIIS
	2000	2400	BOUL							2103.0	2145.0	2	2103.0	2145.0	2	CONT
			CULG				2110.5	2130	1							CONT
			BOUL							2118.4	2126.2	3	2118.4	2126.2	3	IIIGG
	1245	2245	HARV				2122	2126	2	2123	2130	3	2123	2129	3	IIIGG,V
			CULG				2123.5	2124.5	1	2123	2135	2	2125	2128	1	IIIGG,U
			CULG							2125	2128	3				IIIG,V
	2132	2400	MANI													
			HARV							2133	2136	1				IIIG
			CULG							2149.5	2152	2				II
			BOUL										2149.7	2151.8	2	II
14	0000	0230	BOUL													
	0000	0728	CULG													
	0000	1007	MANI													
	0426	1305	WEIS													
	0927	2353	SGMR													
	1246	2245	HARV													
	1328	1819	WEIS													
	1130	2400	BOUL										1429.4	1429.5	1	III
	2131	2400	MANI													
	2029	2400	CULG							2354.5		1				IIIB
15	0000	0230	BOUL													
	0000	1007	MANI													
	0000	0658	CULG							0018	0019	1				IIIG,U
	0418	1639	WEIS													
	0926	2354	SGMR													
	1130	2400	BOUL													
	1245	2245	HARV													
	1643	1820	WEIS													
	2030	2400	CULG													
	2131	2400	MANI													
16	0000	1007	MANI													
	0000	0230	BOUL													
	0419	1611	WEIS													
	0000	0728	CULG							0509		1				IIIB
	0925	2355	SGMR													
	1130	2400	BOUL													
	1245	2245	HARV													
	1616	1811	WEIS													
	2028	2400	CULG													
	2130	2400	MANI													
17	0000	1007	MANI													
	0000	0728	CULG													
	0000	0230	BOUL													
	0416	0812	WEIS													
	0831	1726	WEIS													
	0924	2356	SGMR													
	1246	2245	HARV													
	2130	2400	MANI													
	2029	2400	CULG							2131	2132	1				IIIG
	1130	2400	BOUL										2131.5	2131.7	1	III
18	0000	0728	CULG							0139.5	0141.5	2				IIIG,V,U
	0000	0717	MANI										0140.0	0140.4	1	III
	0000	0230	BOUL										0140.1	0141.2	2	III
			CULG							0230.5	0231.5	1				IIIG,U
			CULG							0242.5	0244.5	1				IIIG
			CULG							0250						IIIB,W
	0418	1348	WEIS													
	0635	1617	OURN													
	0812	1007	MANI													
	0923	2357	SGMR													
	1245	2245	HARV													
	1549	1628	WEIS													
	1930	2400	BOUL													
	2130	2400	MANI													
	2029	2400	CULG							2147.5		1				IIIB
19	0000	0728	CULG													
	0000	0230	BOUL													
	0000	1007	MANI													
	0418	1827	WEIS													
	0635	1615	OURN													
	0922	2358	SGMR													
	1246	2245	HARV													
	2029	2400	CULG													
	2129	2400	MANI													
20	0000	1007	MANI													
	0000	0422	CULG													
	0419	0709	WEIS													
	0714	1402	WEIS													
	0921	2359	SGMR													
	1235	2245	HARV													
	1345	1500	OURN													
	1553	1809	OURN													

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MAY 1974	TIMES OF OBSERVATION		STATION	EVENTS												SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
20	1622	1834	WEIS													
	1745	2400	BOUL													
	2040	2400	CULG													
	2129	2400	MANI													
21	0000	1006	MANI													
	0000	0715	CULG													
	0000	0230	BOUL													
	0415	0728	WEIS													
	0515	1431	DURN													
	0749	1352	WEIS													
	1605	1810	DURN													
	1613	1725	WEIS													
	1550	2400	BOUL										1912.1	1912.2	1	III
			BOUL							2007.9	2008.3	2	2007.9	2008.3	2	III
	0920	2400	SGMR										2007.9	2010.9	1	IIIG
	1232	2245	HARV							2008	2014	2	2008	2014	2	IIIG
			BOUL							2010.3	2013.9	2	2010.3	2013.9	2	III
	2040	2400	CULG													
	2129	2400	MANI													
22	0000	1005	MANI													
	0000	0230	BOUL													
	0000	0715	CULG							0316.5		1				IIIB
	0515	1810	DURN													
	0655	1836	WEIS													
	0920	2401	SGMR													
	1130	2400	BOUL													
	1232	2245	HARV													
	2042	2400	CULG													
	2129	2400	MANI													
23	0000	1005	MANI													
	0000	0715	CULG													
	0000	0230	BOUL													
	0405	0724	WEIS													
	0515	1811	DURN													
	0853	1304	WEIS													
	0919	2402	SGMR													
	1231	2245	HARV													
	1345	1839	WEIS													
	1130	2000	BOUL										1439.1	1439.3	1	III
			BOUL										1442.0	1442.2	1	III
	2045	2400	CULG							2118	2119.5	1				IIIG
	2129	2400	MANI													
24	0000	1006	MANI													
	0000	0715	CULG													
	0406	1840	WEIS													
	0800	1811	DURN													
	0918	2403	SGMR													
	1130	2400	BOUL													
	1232	2245	HARV													
	2045	2400	CULG													
	2129	2400	MANI													
25	0000	1008	MANI													
	0000	0643	CULG													
	0000	0230	BOUL													
	0407	0905	WEIS													
	0906	1841	WEIS													
	0917	2404	SGMR													
	1231	2245	HARV													
	1130	2400	BOUL										1834.6	1834.8	1	III
	2050	2400	CULG							2100	2123	1				IIIN
			BOUL							2100.2	2100.5	2	2100.2	2100.5	2	III
	2129	2400	MANI													
			CULG							2148	2149.5	1				IIIG
			BOUL							2148.7	2148.9	1	2148.7	2148.9	1	III
			CULG							2152	2153.5	1				IIIG
			BOUL							2152.6	2153.0	1	2152.6	2153.0	1	IIIG
			CULG							2204.5	2210	1				IIIGG
			BOUL							2205.0	2207.6	1	2205.0	2207.6	1	IIIG
			BOUL										2209.4	2209.6	1	III
26	0000	0712	CULG							0113	0507					IIIN,W
			CULG							0113.5	0115.5	1				IIIGG
	0000	0230	BOUL							0113.8	0116.1	1	0113.8	0116.1	1	IIIG
			CULG							0139	0143.5	1				IIIGG
			BOUL							0142.6	0143.4	1	0142.6	0143.4	1	IIIG
			CULG							0154	0155	1				IIIG
			CULG							0205	0205.5	1				IIIG
			CULG				0412.5	0414	1	0408	0414	2	0408	0409	1	IIIGG
			CULG				0418	0419	1	0418	0420	2	0418	0420	1	IIIG,V,U
	0000	1008	MANI										0418.5	0419.1	2	III
	0409	0921	WEIS							0418.6	0418.8	1				IIIG
	0916	2404	SGMR													
	1130	2400	BOUL													
	1231	2250	HARV													
	2129	2400	MANI													

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MAY 1974	TIMES OF OBSERVATION		STATION	EVENTS													SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND				
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.		
26	2447	2400	CULG							2308	2310	1					IIIG
27	0000	0230	BOUL														
	0000	1008	MANI														
	0000	0710	CULG							0320	0710						IS,W
			CULG							0333							IIIB,W
	0727	1844	WEIS														
	0831	1803	DURN														
	0916	2405	SGMR														
	1232	2245	HARV														
	1130	2400	BOUL										1852.8	1853.2	1		III
	2050	2400	CULG							2050	2400	1					IS,CONT
	2129	2400	MANI														
			CULG							2132	2133	1					IIIG
			CULG							2152	2400						IIIN,W
			CULG							2241.5		2					IIIB
			BOUL							2243.8	2249.2	2	2243.8	2249.2	2		IIIG
28	0000	0708	CULG							0000	0708	1					IS,CONT
			CULG							0000	0708						IIIN,W
	0000	1008	MANI														
	0000	0230	BOUL										0005.7	0005.9	1		III
			BOUL										0116.2	0116.6	1		IIIG
	0357	1230	WEIS														
			CULG							0453		2					IIIB,V
	0508	1810	DURN														
			CULG							0520		1					IIIB
	1130	2400	BOUL							1225	2000	1					IS
	1236	1848	WEIS														
			BOUL										1601.6	1601.8	1		III
			BOUL										1710.8	1711.2	1		III
	1231	2245	HARV							1822	1824	3	1822	1824	3		IIIG,V
			BOUL							1822.7	1825.0	2	1822.7	1825.0	2		IIIG
	0915	2406	SGMR										1822.7	1823.8	2		III
			BOUL										2015.0	2015.7	2		III
			SGMR										2015.3	2015.6	2		III
	2050	2400	CULG							2050	2400						IS,W,CONT
	2129	2400	MANI														
			CULG							2156	2400						IIIN,W
			BOUL										2209.1	2209.5	1		III
29	0000	0708	CULG							0000	0708						IS,W
			CULG							0000	0708						IIIN,W
	0000	1008	MANI														
	0000	0230	BOUL							0014.7	0015.6	1	0014.7	0015.6	1		IIIG
			CULG				0015	0015.5	1	0014	0016	1					IIIG
			CULG							0019	0020.5	1					IIIG
			BOUL							0019.7	0020.0	1	0019.7	0020.0	1		IIIG
			CULG				0326.5		1	0326.5		2					IIIB,U
	0356	0954	WEIS														
			CULG							0510	0511.5	1					IIIG,V,U
	0517	1812	DURN														
	1231	2245	HARV														
	1305	1431	WEIS														
	1130	2400	BOUL										1332.4	1332.7	1		III
	0915	2407	SGMR										1332.7	1332.9	1		III
			BOUL										1437.0	1437.2	1		III
	1608	1643	WEIS														
	1648	1902	WEIS														
			BOUL							1748.5	1749.0	2	1748.5	1749.0	2		IIIG
			SGMR										1748.8	1749.1	1		III
			BOUL										1751.5	1751.7	1		III
			BOUL							1753.2	1753.7	1	1753.2	1753.7	1		III
			BOUL										2013.5	2013.6	1		III
			BOUL										2040.5	2041.3	1		IIIG
	2050	2400	CULG							2050	2400						IS,W
	2129	2400	MANI														
			CULG							2244	2320						IIIN,W
			BOUL							2307.0	2310.0	2	2307.0	2310.0	2		IIIG
			CULG							2308	2309.5	2					IIIG,V
			SGMR										2308.7	2309.0	1		III
30	0000	0602	CULG							0000	0126						IS,W
	0000	0230	BOUL														
			CULG							0203	0602						IIIN,W
			CULG							0253		1					IIIB,U
			CULG							0302		1					IIIB
			CULG							0315.5		1					IIIB
			CULG							0317.5	0318.5	2					IIIGG
	0000	1008	MANI										0318.6	0319.1	2		III
			CULG							0340	0340.5	1					IIIG
			CULG							0410.5	0411	1					IIIG
	0518	1812	DURN														
			CULG							0538	0538.5	1					IIIG
	0610	0729	CULG							0655.5	0656	1					IIIG
	0340	1901	WEIS							0723	0725	1					IIIG
			MANI										0724.6	0727.5	1		IIIG
	1300	2400	BOUL							1448.9	1450.8	2	1448.9	1450.8	2		IIIG
	0914	2408	SGMR										1449.0	1451.0	2		III
			WEIS							1449.2	1449.4	1					IIIB

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

MAY 1974

MAY 1974	TIMES OF OBSERVATION		STATION	EVENTS												SPECTRAL TYPE
				CENTIMETRIC BAND			DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	START UT	END UT	INT.	
30			SGMR										1625.0	1625.3	1	III
			SGMR										1728.8	1729.1	1	III
			BOUL							1728.8	1729.3	1	1728.8	1729.3	1	III
			BOUL										1809.1	1809.8	1	III
			SGMR										1809.4	1809.8	1	III
	1231	2245	HARV							1853	1854	3	1853	1854	3	IIIB
			BOUL							1853.5	1854.2	2	1853.5	1854.2	2	IIIG
			SGMR										1853.6	1854.2	1	III
			BOUL										2002.0	2004.3	1	IIIG
	2030	2400	CULG							2117.5		1				IIIB
	2131	2400	MANI													
			CULG							2234	2235					IIIG,V,U,W
			CULG							2247						IIIB,W
			CULG							2253.5	2254.5	2				IIIB,V
			BOUL										2253.5	2254.1	2	III
			SGMR										2253.6	2254.1	1	III
31	0000	1008	MANI										0131.4	0132.0	2	III
	0000	0230	BOUL							0131.4	0132.3	2	0131.4	0132.3	2	III
	0000	0730	CULG							0131.5	0132.5	2	0131.5	0132.5	1	IIIB,V,U
			CULG							0156	0208	1				IIIGG
			CULG							0321.5	0322	1				IIIG
	0517	1801	DURN													
			CULG							0537.5		1				IIIB
			CULG							0549		1				IIIB
			CULG							0555.5	0556	2				IIIG
			CULG							0618		1				IIIB
			CULG							0631		2				IIIB
			CULG							0637		1				IIIB
			CULG							0656		2				IIIB,U
	0818	1801	DURN													
	0914	2409	SGMR										1103.5	1109.6	1	IIIG
			WEIS							1103.7	1103.9	1				IIIG
			WEIS							1107.7	1108.7	1				IIIG
	0344	1545	WEIS							1131.3	1131.9	3				IIIG
			SGMR										1131.3	1131.6	2	III
			WEIS							1144.4	1144.5	1				IIIB
			WEIS							1145.9	1146.2	2				IIIB
			SGMR										1146.0	1146.3	2	III
			SGMR										1518.8	1519.0	2	III
	1130	2400	BOUL										1518.8	1519.1	1	III
			BOUL							2021.3	2025.0	2	2021.3	2025.0	2	IIIG
	1231	2245	HARV							2023	2024	2	2023	2024	2	IIIG
			BOUL										2029.5	2029.8	1	III
	2129	2400	MANI													
	2030	2400	CULG							2131	2131.5	2				IIIG
			BOUL							2131.3	2132.0	2	2131.3	2132.0	2	III

The symbols used in connection with the spectral type in describing the important bursts are as follows:

B = Single burst
G = Small group (< 10) of bursts
GG = Large group (> 10) of bursts
C = Underlying continuum (particularly with type I)
S = Storm in the sense of intermittent but apparently connected activity
N = Intermittent activity in this period
U = U-shaped burst of Type III
RS = Reverse slope burst
DP = Drifting pairs
DC = Drifting Chains
H = Herringbone
W = Weak
P = Pulsations
CONT = Continuum
UNCLF = Unclassified activity

SELECTED SOLAR EVENTS

MAY 1974

Culgoora

UT Date 1974 MAY	HELIOGRAPH EVENT							Spectral Type	REMARKS
	Start (UT)	End (UT)	Freq. (MHz)	Positions: Central Dist. ($R_\odot$)	Positions: Position Angle (Deg.)	Polarization	Intensity (1-3)		
1	0232	0234	{ 43.25	1.1	60	-	3 }	III GG	*
			{ 80	1.0	60	0	3 }		
			{160	0.9	90	0	2 }		
2	0143	0146	{ 43.25	1.2	40	-	2 }	III G, V	*
			{ 80	0.9	60	0	2 }		
			{160	0.8	90	0	1 }		
3	0308	0312	{ 43.25	1.1	40	-	3 }	III G, U	*
			{ 80	0.8	40	0	2 }		
	0515	0520	{ 43.25	1.1	40	-	3 }	III GG,V, U	Complex source structure
			{ 80	0.8	40	0	3 }		
			{160	0.7	90	0	3 }		
4	0102	0105	{ 43.25	0.8	50	-	2 }	III G	*
			{ 80	0.5	70	0	2 }		
			{160	0.5	90	0	1 }		
5	0113	0115	{ 43.25	0.3	90	-	1 }	III G	*
			{ 80	0.3	90	0	1 }		
5/6	2300	0500	{ 80	0.0	-	L	1-2}	I	
			{160	0.2	180	L	1 }		
	0126	0127	{ 43.25	0.0	-	-	2 }	III B	*
			{ 80	0.0	-	0	2 }		
7	0124	0126	{ 43.25	1.0	260	-	3 }	III GG	*
			{ 80	0.9	240	0	3 }		
			{160	0.8	240	0	2 }		
	0226	0227	{ 43.25	1.0	320	-	2 }	III B	*
			{ 80	0.7	300	0	2 }		
			{160	0.3	250	0	1 }		
8	0040	0050	{ 43.25	1.3	330	-	3 }	III GG	*
			{ 80	0.9	320	0	3 }		
			{160	0.2	260	0	2 }		
9	0223	0224	{ 43.25	1.3	270	-	2 }	III G	*
			{ 80	1.1	260	0	2 }		
			{160	0.8	270	0	1 }		
11	0205	0207	{ 43.25	1.2	220	-	2 }	III G	*
			{ 80	1.2	200	0	2 }		
			{160	1.0	200	0	2 }		
29	0019	0021	{ 43.25	1.2	230	-	2 }	III G	*
			{ 80	1.0	230	0	2 }		
			{160	1.0	220	0	2 }		
31	0131	0132	{ 43.25	1.8	50	-	3 }	III B, V	U
			{ 80	1.5	50	0	2 }		

Days without Heliograph observations: Nil

* Other type III observed at same position during day.

COSMIC RAY INDICES

(Neutron Monitors)

MAY 1974

MAY 1974	THULE Average cts/hr	ALERT Average cts/hr	DEEP RIVER Average cts/hr	CALGARY Average cts/hr	SULPHUR MT Average cts/hr	KIEL Average cts/hr	TOKYO Average cts/hr
1	4513.4	7408.8	6962.5	11949.8	8779.4	6312.8	3561.0
2	4521.6	7424.6	6974.3	12012.8	8851.8	6323.7	3569.5
3	4514.0	7427.1	6961.7	11974.1	8818.2	6311.5	3561.9
4	4450.6	7316.0	6923.5	11864.2	8748.1	6269.7	3542.5
5	4395.4	7276.0	6836.4	11674.7	8610.6	6191.6	3522.1
6	4415.9	7278.8	6849.5	11636.3	8625.3	6177.7	3519.7
7	4304.7	7108.5	6683.2	11347.6	8388.0	6036.6	3476.7
8	4322.0	7105.9	6662.3	11335.2	8374.3	6022.4	3474.7
9	4396.3	7258.6	6746.6	11520.7	8504.1	6130.9	3487.5
10	4434.6	7324.8	6824.6	11682.1	8663.9	6182.5	3511.6
11	4449.2	7343.2	6853.4	11727.0	8725.2	6217.4	3529.1
12	4490.2	7420.7	6906.1	11790.5	8804.3	6247.5	3541.6
13	4538.5	7476.5	6998.8	11964.2	8908.9	6295.0	3558.4
14	4500.1	7411.9	6912.2	11831.4	8808.4	6260.0	3532.1
15	4485.5	7400.9	6877.1	11779.4	8786.3	6256.4	3525.9
16	4486.2	7389.5	6880.9	11777.8	8731.8	6255.4	3529.9
17	4476.2	7364.4	6843.1	11778.4	8736.7	6210.2	3529.8
18	4465.0	7354.4	6831.8	11701.8	8728.2	6196.3	3514.3
19	4427.2	7286.9	6806.0	11642.4	8647.2	6172.9	3507.6
20	4411.8	7262.4	6810.7	11686.1	8667.5	6170.1	3501.8
21	4423.8	7289.1	6810.7	11706.4	8680.5	6179.0	3503.0
22	4430.1	7300.2	6804.6	11720.5	8674.2	6209.1	3506.6
23	4416.9	7277.1	6791.7	11680.6	8668.8	6184.2	3507.9
24	4404.9	7263.3	6804.3	11642.8	8618.9	6190.8	3512.1
25	4407.2	7265.2	6820.0	11679.6	8638.7	6181.0	3521.2
26	4420.4	7301.6	6846.5	11698.2	8634.0	6175.7	3528.0
27	4430.5	7320.5	6863.8	11755.2	8702.4(20)	6209.5	3536.5
28	4446.5	7340.9	6863.0	11764.2	-- (0)	6228.6	3521.4
29	4426.6	7300.9	6794.6	11688.5	-- (0)	6186.1	3509.8
30	4402.8	7254.8	6802.3	11716.6	-- (0)	6131.8	3505.8
31	4373.1	7225.3	6715.6	11557.3	8430.5(5)	6100.0	3491.2
MEAN	4438.1	7315.4	6838.1	11718.1	8677.0	6200.5	3520.7

( ) Number of hours for which data are available if less than 24.

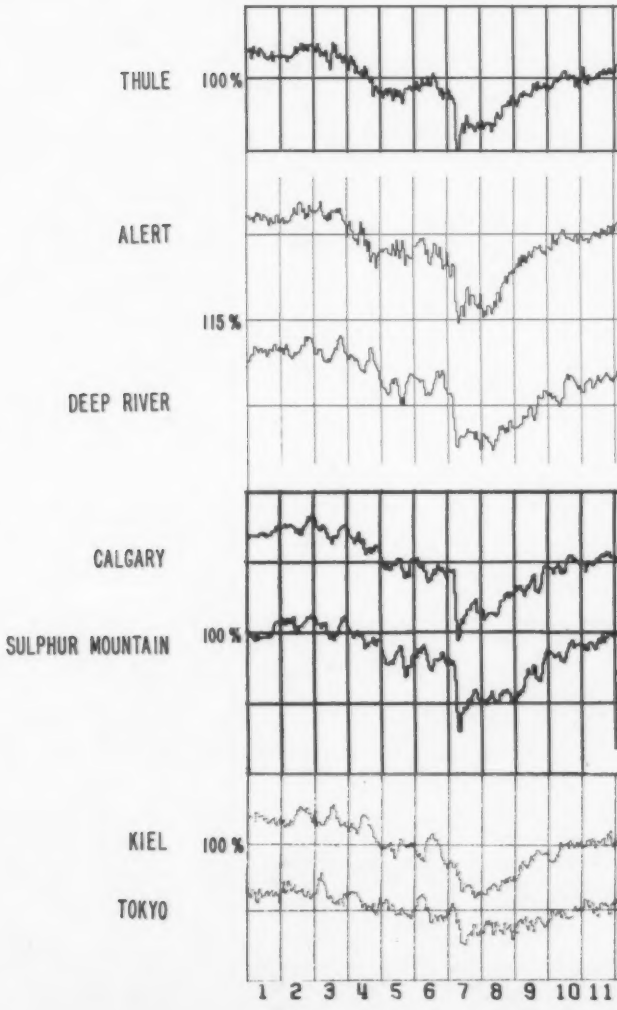
Thule, Alert, Calgary, Sulphur Mountain and Kiel Scaling Factors = 100.
Deep River Scaling Factor = 300.

Tokyo " " = 128.

See *Descriptive Text* for other characteristics.

Note: The Dallas Neutron Monitor Station has ceased operation as of March 31, 1974.

(Press


THULE
100 %
ALERT
115 %
DEEP RIVER
CALGARY
SULPHUR MOUNTAIN
100 %
KIEL
100 %
TOKYO
1 2 3 4 5 6 7 8 9 10 11

COSMIC RAY INDICES

ressure Corrected Hourly Totals)

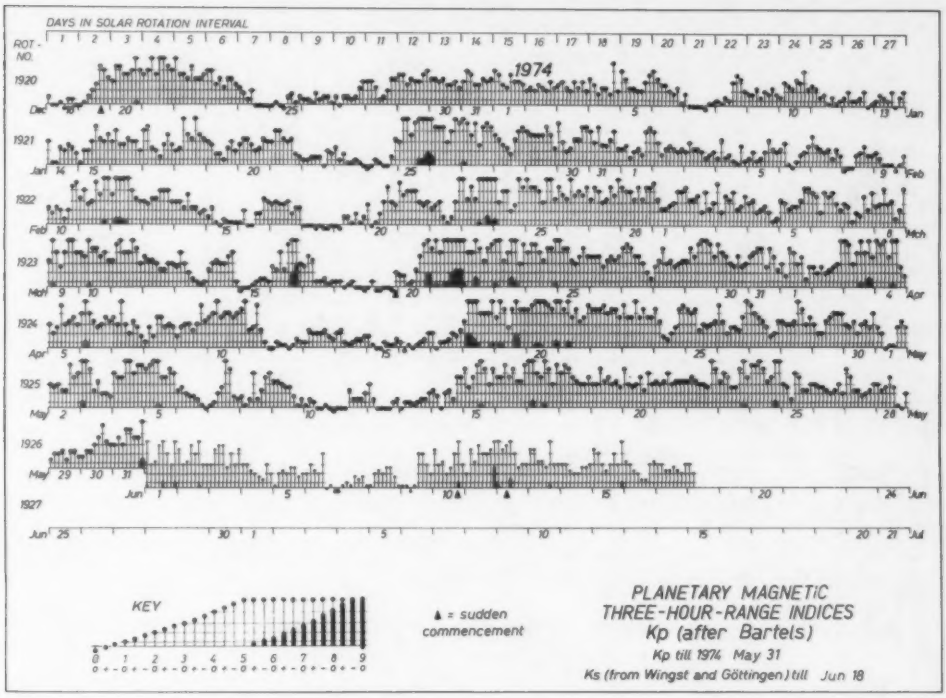
MAY 1974

GEOMAGNETIC ACTIVITY INDICES

MAY 1974

Day	Three-Hour Range Indices Kp									Prel Ci	Cp	Ap	aa				
	1	2	3	4	5	6	7	8	Sum				N	S	M		
1 Q	3-	2	0+	1-	1-	3-	3+	3-	15	0.3	0.5	9	16	11	8	19	K
2	3	3-	3	2+	2+	5-	4-	4	26-	0.9	1.0	18	30	32	22	40	
3	6-	5	4+	2+	3+	2	2	2-	26+	1.0	1.2	24	35	30	47	19	
4 D	4	4-	4-	5	5	4	5-	5-	35-	1.3	1.3	34	58	39	40	57	
5 D	4+	5-	5	5+	4-	4-	4+	4	35	1.3	1.4	35	48	49	53	45	
6QQ	2+	3-	2	2-	2-	1+	1-	0+	13-	0.3	0.3	6	12	9	14	7	C
7	1-	1	2	3-	5	4+	2-	1+	19-	0.8	0.8	15	19	21	12	27	
8	2-	1-	1+	4	1+	2+	4-	4	19	0.7	0.7	13	28	16	18	27	
9 Q	3+	3+	3	3-	3-	2-	1-	1+	19-	0.6	0.6	11	21	21	26	17	
10QQ	1-	1+	1	0+	0+	1-	0+	0	5-	0.0	0.0	3	5	4	5	4	CK
11QQ	0+	0+	0+	2+	1+	1+	1+	2	9+	0.1	0.2	5	12	8	6	14	CC
12QQ	3	1+	0+	0+	0+	0+	1	1+	8	0.1	0.2	5	12	4	10	7	CC
13QQ	0+	1	1	1-	1	1+	1+	2	9-	0.1	0.1	4	12	8	8	12	CC
14 Q	2+	2-	0+	2	2+	1+	4-	4-	17+	0.5	0.6	10	24	15	11	29	
15 D	4+	3-	4-	5-	5+	4+	3	4+	32+	1.5	1.3	30	43	50	40	53	
16	4-	4-	5-	4-	4+	3+	3+	5-	31+	1.3	1.2	26	43	57	50	50	
17 D	5	6-	4	4-	5+	4+	3	5-	36-	1.4	1.4	38	43	57	53	47	
18	4	5-	4+	4-	3+	3	3	4-	30-	1.2	1.1	24	31	45	42	34	
19	3	3	4+	3+	4-	3	3+	3-	26+	1.0	1.0	18	34	47	37	44	
20	4+	3	3-	3	4-	2+	4	3	26	1.1	1.0	18	32	39	32	39	
21	3+	3	3+	4	3	3+	3+	3+	27-	1.0	1.0	18	34	41	42	33	
22	3+	4-	3+	3	3	3-	5	4+	28+	1.0	1.1	22	39	39	30	49	
23	3+	4	4-	3-	3-	4+	5+	4-	30-	1.3	1.2	25	38	49	39	47	
24 D	5-	5-	5	4+	3+	4-	6-	5	36+	1.5	1.4	39	53	63	61	55	
25	3	3-	1+	4	4-	2+	2+	3	22+	0.9	0.8	14	27	32	32	27	
26	3	3-	3-	2+	2	2+	3	2	20	0.6	0.6	11	22	25	22	25	
27	4+	4-	2+	2+	2-	2	2+	3	22-	0.7	0.8	14	27	21	29	19	
28 Q	3	2+	3-	4-	3-	1-	0+	2	17+	0.5	0.6	10	18	23	29	14	
29 Q	1+	2	2	2+	1+	2+	2+	2-	15+	0.4	0.4	7	18	18	20	18	
30	2-	2+	2+	3	4-	5-	3+	3	24	0.9	0.9	17	30	25	19	37	
31	3	4-	3	4+	4+	4-	4-	6	32-	1.2	1.3	30	44	39	34	50	
									MEAN	0.82	0.84	18	29.3	30.3	29.8		

GEOMAGNETIC ACTIVITY INDICES



DAILY AVERAGE INDICES Ap

	1973							1974				
DAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
1	3	19	12	5	5	4	4	17	13	20	17	9
2	20	11	16	6	31	7	2	9	12	18	15	18
3	14	7	7	6	48	5	5	11	8	20	39	24
4	19	4	8	12	12	18	29	13	7	10	35	34
5	10	4	9	15	10	14	17	14	8	18	18	35
6	8	3	13	9	12	9	10	12	7	20	26	6
7	4	3	8	8	6	28	8	2	10	13	18	15
8	6	13	9	8	6	11	7	10	5	17	13	13
9	9	8	5	44	10	12	21	7	4	33	16	11
10	33	6	4	27	21	8	8	14	14	30	28	3
11	34	6	4	12	11	6	8	6	30	32	19	5
12	30	6	5	7	15	4	4	5	40	15	3	5
13	24	8	10	8	17	10	4	5	20	10	7	4
14	18	8	8	4	7	8	6	8	12	16	5	10
15	13	32	4	12	6	8	8	15	4	3	4	30
16	11	15	3	14	30	10	4	15	7	42	4	26
17	18	6	2	10	27	17	6	16	11	9	6	38
18	30	6	4	7	22	19	3	24	1	3	48	24
19	38	10	6	3	20	4	13	9	4	2	39	18
20	18	9	9	12	20	6	29	14	12	23	46	18
21	6	5	6	15	37	23	34	16	23	68	35	18
22	3	6	12	17	20	7	25	5	14	39	31	22
23	10	14	22	63	6	8	18	4	44	42	29	25
24	34	6	46	28	7	26	4	4	29	34	19	39
25	6	9	29	27	5	42	3	50	34	28	20	14
26	4	36	18	25	3	18	4	38	28	20	21	11
27	4	29	26	8	4	14	6	34	26	22	19	14
28	21	14	28	4	20	6	11	18	27	18	23	10
29	41	18	20	4	86	5	19	22		34	19	7
30	29	19	13	4	28	4	15	21		20	16	17
31		26	9		19		17	19		24		30
MEAN	17	12	12	14	18	12	11	15	16	23	21	18

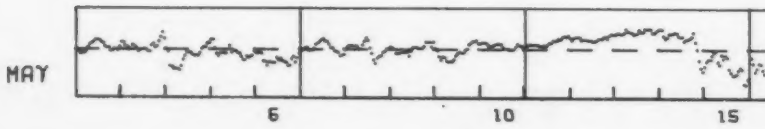
HOURLY EQUATORIAL D

MAY

NASA/GODDARD SPACE FLIGHT CENTER

(Time-UT)

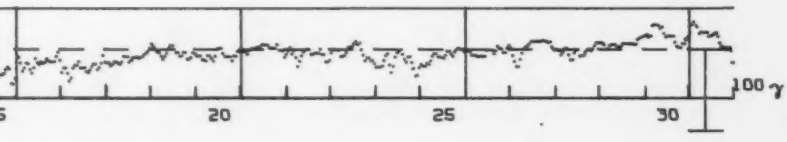
DAY	1	2	3	4	5	6	7	8	9	10	11
1	-2	-3	-6	-5	-6	-3	2	5	7	9	11
2	8	6	3	1	-2	0	4	8	0	-4	-2
3	0	-4	-22	-23	-25	-24	-25	-27	-22	-13	-9
4	11	10	0	-6	-9	-6	-5	-6	-7	-2	3
5	-6	-7	-3	-6	-16	-17	-21	-17	-17	-18	-18
6	-2	-2	1	2	-2	-3	-2	1	5	7	9
7	-2	2	4	3	3	2	2	-1	0	4	9
8	2	0	-2	-6	-7	-5	-4	-5	-5	-4	-9
9	0	-3	-11	-14	-11	-12	-15	-17	-15	-15	-13
10	5	7	7	6	4	2	2	4	5	6	5
11	2	4	5	5	4	4	3	3	2	1	4
12	13	10	13	14	14	13	10	11	11	11	9
13	17	19	19	18	18	20	24	21	19	18	15
14	24	23	15	12	14	18	18	19	20	18	15
15	-22	-16	-13	-12	-8	-4	-2	-16	-19	-8	-12
16	-16	-10	-17	-28	-24	-17	-19	-26	-30	-23	-12
17	-30	-24	-24	-30	-40	-36	-24	-20	-21	-16	-23
18	-18	-13	-21	-19	-16	-16	-18	-20	-16	-9	-9
19	5	3	-1	-4	-6	-9	-13	-10	-6	0	4
20	-9	-9	-10	-14	-14	-16	-8	-9	-12	-15	-10
21	-3	-4	-5	-7	-3	0	1	-1	2	1	3
22	-7	-3	1	-6	-3	-12	-22	-16	-8	-5	-2
23	-5	-2	-1	-3	-3	-11	-9	-8	-5	2	2
24	-23	-23	-22	-21	-14	-8	-6	-21	-30	-21	-11
25	-20	-22	-21	-18	-20	-15	-10	-6	-7	-10	-10
26	-2	-4	-5	-8	-9	-9	-11	-9	-9	-10	-9
27	1	-10	-16	-22	-23	-13	-5	-1	2	4	6
28	-2	-3	-4	-8	-5	0	-1	-9	-14	-14	-5
29	7	7	4	-1	-1	3	5	5	5	2	2
30	16	17	14	15	29	29	29	27	24	26	18
31	20	29	32	28	25	18	20	18	18	18	14



L Dst VALUES (PROVISIONAL)

MAY 1974

12	13	14	15	16	17	18	19	20	21	22	23	24
11	9	7	5	2	0	0	-3	-3	0	0	-3	2
-1	0	-2	-4	-5	4	6	1	3	9	14	20	12
-5	-5	-6	-8	-10	-9	-10	-5	0	2	2	6	7
-6	-3	-4	-6	-7	-10	-14	-14	-10	-12	-9	-8	-4
-11	-14	-12	-15	-17	-18	-21	-20	-12	-10	-17	-12	-6
11	12	9	9	5	1	-1	-3	-5	-6	-9	-8	-7
13	10	-1	-6	-15	-18	-11	-9	-8	-5	-3	-1	0
-3	1	1	1	-1	-1	0	3	8	7	7	2	8
-9	-6	-4	-6	-6	-2	0	5	7	9	9	10	6
5	2	-1	-1	-2	-3	-2	-1	2	5	3	2	1
2	5	7	7	10	8	10	12	11	14	15	13	16
9	7	9	10	12	12	12	14	15	12	16	18	17
18	19	23	20	20	24	24	23	23	19	18	21	23
13	13	9	11	12	13	15	20	8	-2	-15	-24	-28
-8	-11	-25	-29	-32	-32	-30	-26	-23	-25	-43	-44	-36
-17	-20	-16	-18	-16	-13	-15	-17	-16	-15	-9	-4	-15
-23	-24	-28	-30	-26	-22	-19	-19	-26	-23	-18	-8	-17
-11	-16	-14	-11	-11	-9	-12	-10	-9	-7	-5	-3	1
4	-1	-5	-6	-9	-8	-5	-5	-14	-14	-11	-5	-7
0	1	0	-6	-10	-9	-9	-11	-15	-10	-10	-3	-4
5	5	3	4	1	0	-1	1	5	-2	-3	-4	-11
0	-2	-7	-7	-5	-5	-5	-1	-7	-8	-17	-17	-14
3	6	9	5	7	-3	-8	-15	-12	-11	-15	-14	-18
-5	-3	-1	-7	-13	-16	-10	-9	-18	-25	-34	-32	-23
-12	-13	-8	-3	-3	-6	-9	-4	-1	1	-2	-2	-4
-2	-1	-2	-2	-6	-3	3	0	-2	-5	-6	0	4
9	9	9	9	9	8	10	8	7	6	8	2	-2
-2	-2	-9	-8	-8	-5	-2	0	-3	0	3	7	6
3	6	6	6	5	4	6	4	4	11	13	14	15
14	15	15	15	15	6	2	0	0	5	6	11	14
15	16	18	19	14	5	2	-1	-1	0	1	-3	-18



PRINCIPAL MAGNETIC STORMS

MAY 1974

OBS. 2 letter IAGA code	GEOMAG-NETIC LATI-TUDE	COMMENCEMENT DAY	COMMENCEMENT hr min (UT)	TYPE	SC - AMPLITUDES D(')	SC - AMPLITUDES H(γ)	SC - AMPLITUDES Z(γ)	MAXIMUM 3 HOUR - INDEX K DAY(3 HOUR PERIOD)	K	RANGES D(')	RANGES H(γ)	RANGES Z(γ)	UT END DAY	UT END HOUR
GU	4.0N	1	2150	..	..	..	..	03(1)	5	10	110	30	06	06
GN	43.2S	1	17--	..	..	..	..	4(7,8) 5(4,7)	5	15	80	90	06	08
CO	64.6N	2	22--	..	..	..	..	05(3)	7	139	1560	870	06	06
SI	60.0N	2	07--	..	..	..	..	04(4)	6	50	490	600	05	03
NE	55.1N	2	2206	..	..	..	..	3(1,2,3)	5	32	108	147	03	10
BD	48.9N	2	16--	..	..	..	..	05(4)	6	29	90	85	06	18
TO	46.7S	2	00--	..	..	..	..	05(4)	5	17	90	40	06	09
NE	55.1N	4	00--	..	..	..	..	5(4)	6	32	94	173	06	07
WI	54.2N	4	01--	..	..	..	..	04(4,5,6,7,8) 05(4,5,7)	5	30	185	50	06	01
FR	49.6N	4	01--	..	..	..	..	05(3)	5	24	90	78	06	06
TU	40.4N	4	01--	..	..	..	..	05(2,3,4)	5	13	75	35	06	02
HD	7.6N	4	0100	..	..	..	..	04(4,5,7,8) 05(3,5,7)	4	6	92	39	05	22
HR	33.7S	4	20--	..	..	..	..	04(7)	5	13	42	44	04	24
CO	64.6N	7	0223	SC*	- 2	+28	- 5	07(5)	7	189	1180	630	07	18
CO	64.6N	14	18--	..	..	..	..	15(5) 24(4)	7	249	1630	920	25	04
NE	55.1N	14	19--	..	..	..	..	17(2,3) 18(1)	6	47	121	198	18	12
WI	54.2N	14	18--	..	..	..	..	17(5)	6	25	180	100	18	08
TU	40.4N	14	20--	..	..	..	..	16(2,8) 17(1,2,4) 18(1,2,3) 19(3) 20(7) 23(2,7) 24(3)	5	15	115	35	25	15
HD	7.6N	14	1800	..	..	..	..	15(5) 17(5)	5	6	124	27	17	16
GN	43.2S	14	19--	..	..	..	..	15(5) 17(5) 23(7)	6	26	120	150	25	04
TO	46.7S	14	19--	..	..	..	..	15(5) 16(3,4,5) 17(4,5)	5	27	150	60	18	18
KG	56.5S	14	20--	..	..	..	..	15(6)	5	--	--	--	16	--
SI	60.0N	15	00--	..	..	..	..	17(4)	7	90	650	580	18	18
AL	9.5N	15	06--	..	..	..	..	15(5)	5	5	114	36	15	23
GU	4.0N	15	0022	..	..	..	..	16(3)	5	10	90	30	18	17
AN	1.5N	15	06--	..	..	..	..	--		--	--	--	--	--
TV	1.1S	15	06--	..	..	..	..	--		3	204	75	15	23
PM	18.7S	15	00--	..	..	..	..	15(5) 16(3) 17(1,2) 18(2) 21(4) 23(2) 24(3,4)	5	5	130	50	25	15
HR	33.7S	15	12--	..	..	..	..	15(5) 16(3)	5	25	84	91	16	09
FR	49.6N	16	17--	..	..	..	..	17(2)	6	27	140	85	25	05
BD	48.9N	16	07--	..	..	..	..	17(2)	6	28	110	70	25	21
HR	33.7S	16	22--	..	..	..	..	16(8)	5	6	40	42	17	01
NE	55.1N	18	19--	..	..	..	..	19(2,3)	5	22	99	96	20	16
NE	55.1N	22	20--	..	..	..	..	23(2) 24(3)	6	39	135	173	25	05
WI	54.2N	22	12--	..	..	..	..	22(7) 23(7) 24(7)	6	35	240	75	25	01
HR	33.7S	22	19--	..	..	..	..	22(7)	5	15	41	47	23	01
GU	4.0N	23	0420	..	..	..	..	24(3)	5	10	80	40	25	15
HR	33.7S	23	18--	..	..	..	..	23(7)	6	21	60	73	23	20
TO	46.7S	23	03--	..	..	..	..	23(2,7) 24(3,4,7) 25(4)	5	26	110	50	25	15
SI	60.0N	24	00--	..	..	..	..	24(3)	7	70	630	460	25	13
HR	33.7S	24	00--	..	..	..	..	24(1)	5	13	18	37	24	05
HR	33.7S	24	19--	..	..	..	..	24(7,8)	5	17	45	64	24	24
GN	43.2S	29	14--	..	..	..	..	31(8)	6	20	90	100	03	12
CO	64.6N	30	07--	..	..	..	..	31(4)	7	128	1220	750	02	18
NE	55.1N	30	03--	..	..	..	..	31(4) 01(1)	5	23	126	160	02	18
WI	54.2N	30	08--	..	..	..	..	31(8)	6	22	135	75	31	24
HD	7.6N	30	0330	..	..	..	..	31(2,8)	4	5	116	15	01	03
FR	49.6N	31	03--	..	..	..	..	31(8)	5	25	110	70	04	07
HR	33.7S	31	21--	..	..	..	..	31(8)	5	16	54	53	31	24

Reports were received from the following observatories:

College Newport Fredericksburg Tucson Alibag Guam Trivandrum Hermanus Toolangi
Sitka Witteveen Boulder San Juan Hyderabad Annamalainagar Port Moresby Gnangara Port-aux-Francais

SUDDEN COMMENCEMENTS AND SOLAR FLARE EFFECTS

MAY 1974

PRELIMINARY REPORT ON RAPID MAGNETIC VARIATIONS (by Dr. A. Romana)

The meaning of the station symbols is given in the IAGA-Bulletins nr. 12 and 32. Times of ssc and si commencements are mean values. If given by ten or more stations they are underlined.

Sudden commencements followed by a magnetic storm or a period of storminess (ssc)

n o n e

Sudden impulses found in the magnetograms (si)

n o n e

Solar-flare effects (sfe)

Effects confirmed by ionospheric or solar observations are underlined.

01 1524 - 1547 LG SZ?

03 0650 - 0704 TN

09 0728 - 0736 SZ

09 0815 - 0823 SZ

19 2008 - 2028 TN

29 2224 - 2244 TN

RADIO PROPAGATION QUALITY FIGURES AND FORECASTS

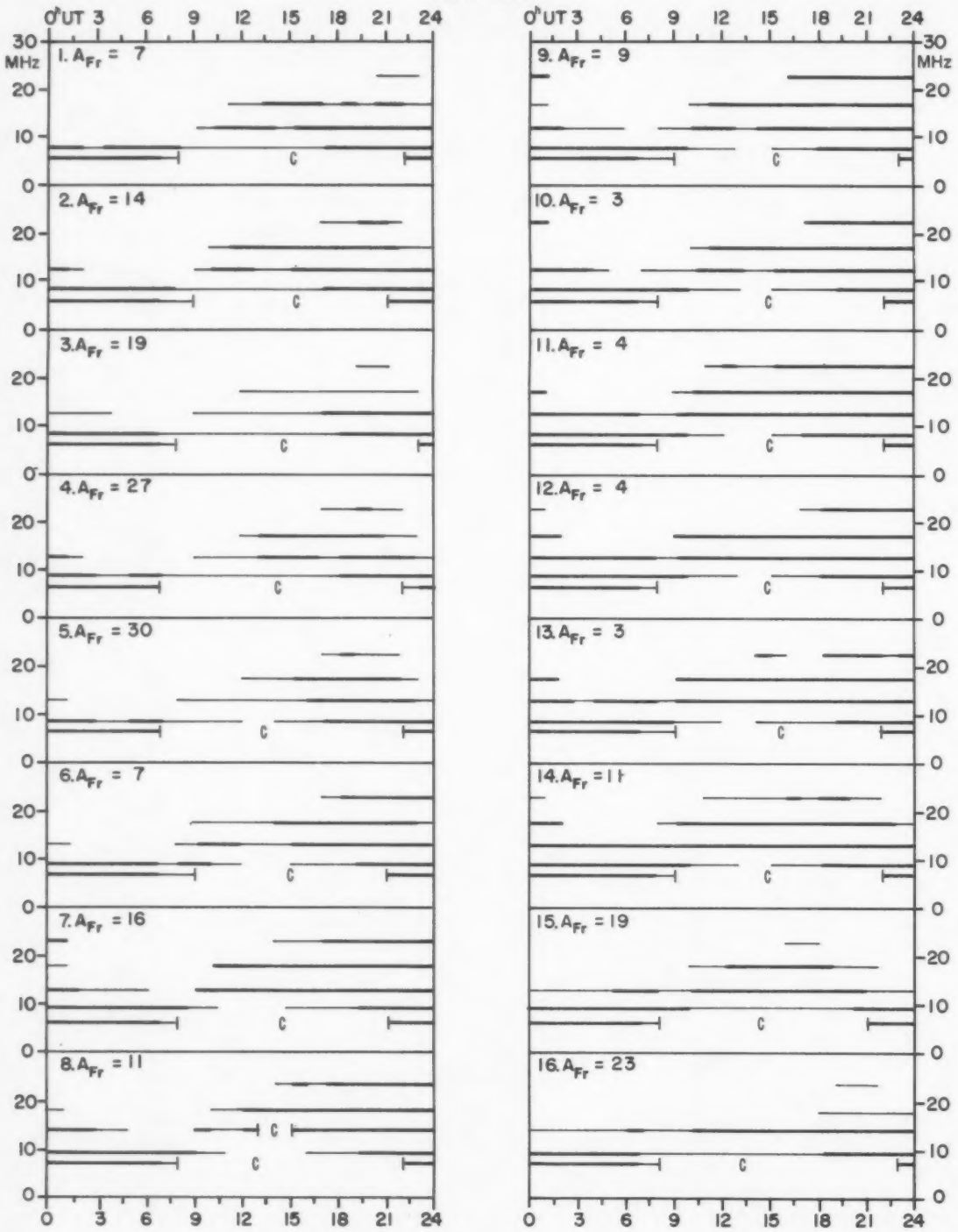
MAY 1974

North Atlantic

MAY 1974	WHOLE DAY INDICES NORTH ATLANTIC	ADVANCE FORECASTS (JC-REPORTS) FOR WHOLE DAY	NORTH ATLANTIC 6-HOURLY QUALITY FIGURES 00 TO 06	06 TO 12	12 TO 18	18 TO 24	SHORT-TERM FORECASTS ISSUED ABOUT ONE HOUR IN ADVANCE OF 02	08	14	20	GEOMAGNETIC INDICES K_{FR} HALF DAY (1)	(2)	A_{FR} OBSERVED
01	6+	4	6+	6+	7-	6o	5	5	6	6	1	3	7
02	6-	5	6o	6o	6-	6-	6	6	6	5	3	3	14
03	5+	6	5-	5o	6-	6o	6	5	6	5	(4)	3	19
04	6+	6	6+	6o	7-	6o	5	5	6	6	(4)	(4)	27
05	6-	6	6-	6-	6-	6o	5	5	5	5	(5)	3	30
06	6o	6	6+	5+	6o	6o	5	5	6	6	2	1	7
07	6o	6	6o	6-	6+	6+	6	6	7	6	2	3	16
08	6+	6	7-	6+	6-	6+	6	6	6	6	2	3	11
09	6o	6	6o	6o	6o	6o	6	6	6	6	3	2	9
10	6o	6	6-	6o	7-	6-	6	6	6	7	1	1	3
11	6o	6	6+	6-	6o	7-	6	6	7	6	1	2	4
12	6o	6	7-	6-	6o	6o	6	6	6	7	1	1	4
13	6+	6	6+	6+	6+	7-	6	6	7	7	1	1	3
14	6+	6	6+	6+	7o	6-	6	6	7	7	2	3	11
15	6-	5	5+	6+	6+	6-	6	6	6	5	3	3	19
16	5+	4	6-	5o	5+	5o	5	4	5	5	(4)	(4)	23
17	4o	4	4+	3o	4o	5o	5	4	5	5	(5)	(4)	35
18	5+	4	4o	5+	6-	6-	4	4	5	5	(4)	3	24
19	6+	5	6-	6+	7-	6+	5	5	6	5	3	3	16
20	6o	5	6-	6-	6+	6+	5	5	5	6	(4)	3	19
21	6-	5	6-	6-	6o	6o	5	5	5	6	(4)	3	18
22	6-	6	6o	5o	6o	6+	6	5	5	6	3	3	17
23	6o	6	6o	6+	6+	6o	6	5	5	6	(4)	3	21
24	5o	5	4o	4o	6o	6o	6	5	5	6	(4)	(4)	28
25	5+	5	5+	4+	6-	6+	4	4	5	5	3	3	15
26	6+	6	7-	7-	6-	7o	5	5	6	6	2	2	9
27	6-	6	6-	5-	6o	7o	6	5	6	6	3	2	14
28	6+	6	7-	6-	6o	7o	6	6	6	6	3	2	10
29	7-	6	7-	7-	7-	6+	6	5	6	7	2	2	6
30	6o	6	7-	5o	6o	6+	7	6	6	5	3	(4)	19
31	6-	5	6o	5o	5+	6-	5	5	6	5	3	(4)	22

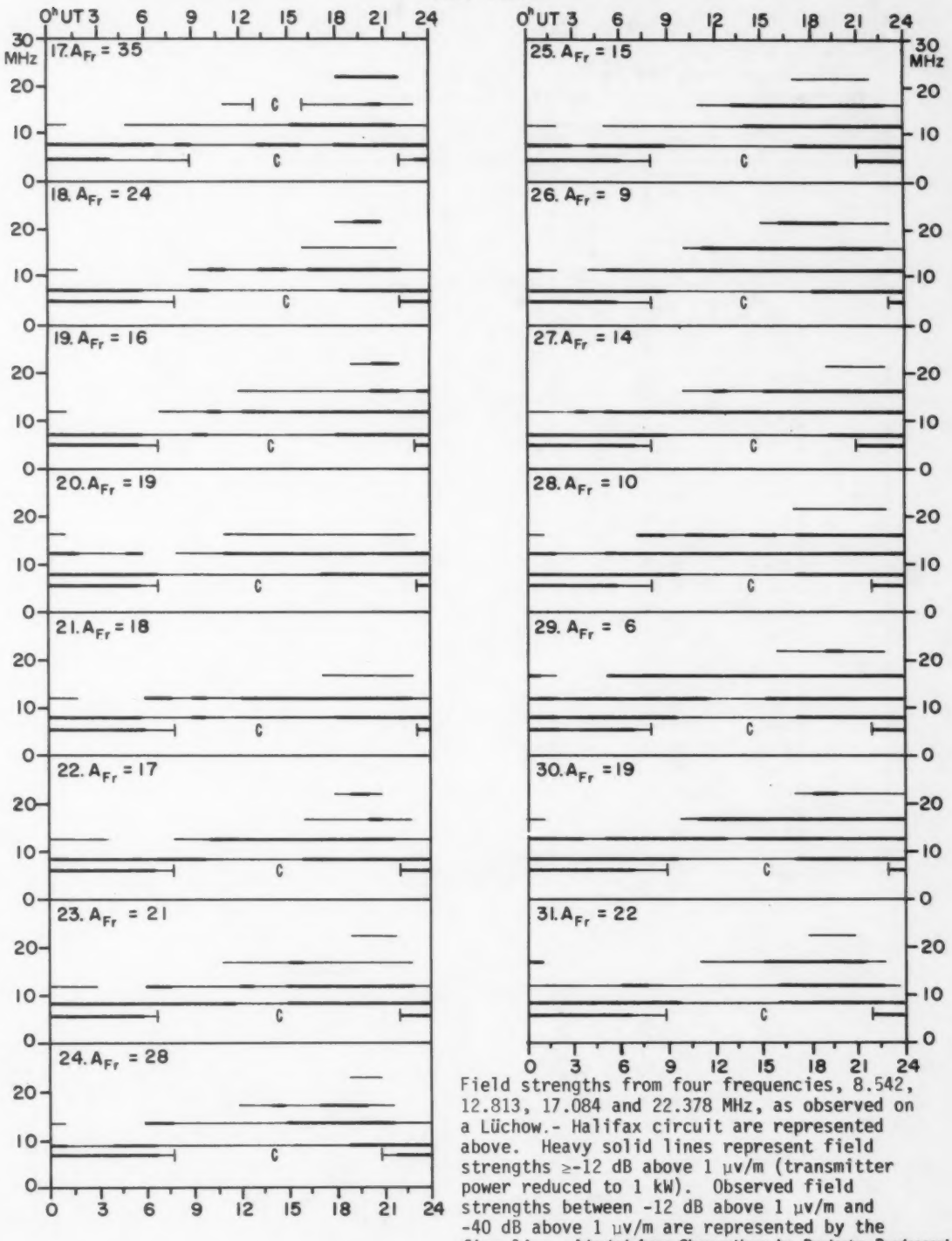
TRANSMISSION FREQUENCY RANGES -- NORTH ATLANTIC PATH

MAY 1974



TRANSMISSION FREQUENCY RANGES – NORTH ATLANTIC PATH

MAY 1974



Field strengths from four frequencies, 8.542, 12.813, 17.084 and 22.378 MHz, as observed on a Lüchow.- Halifax circuit are represented above. Heavy solid lines represent field strengths ≥-12 dB above 1 μv/m (transmitter power reduced to 1 kW). Observed field strengths between -12 dB above 1 μv/m and -40 dB above 1 μv/m are represented by the fine line. Adapted from Observations by Deutsche Bundespost

RADIO PROPAGATION QUALITY INDICES

MAY 1974

Calculated from the records of four frequencies
on the circuit Lüchow - Halifax (Germany - Canada)

Date	Day	Night	D+N
1.	6.3	5.5	5.5
2.	6.1	4.2	5.1
3.	4.8	4.6	4.3
4.	5.1	3.7	4.3
5.	4.8	4.5	4.4
6.	7.2	7.2	6.5
7.	7.8	7.4	7.0
8.	7.2	6.9	6.4
9.	7.5	7.5	6.8
10.	7.5	7.6	7.0
11.	7.9	8.4	7.4
12.	7.3	7.8	6.9
13.	7.3	8.4	7.0
14.	6.8	5.5	6.1
15.	4.9	4.4	4.6
16.	4.1	3.3	3.6
17.	4.2	3.0	3.6
18.	3.7	3.4	3.4
19.	5.0	5.0	4.6
20.	4.7	4.3	4.3
21.	4.0	4.2	3.9
22.	4.1	3.9	3.9
23.	4.8	3.4	4.2
24.	4.0	3.2	3.6
25.	5.5	4.7	4.9
26.	6.2	4.8	5.5
27.	6.1	6.1	5.6
28.	6.2	7.6	6.4
29.	6.3	6.3	5.9
30.	6.0	5.2	5.4
31.	4.7	3.7	4.2

USCOMM-NOAA-ASHEVILLE-7-30-74-1125

AMERICAN REVOLUTION BICENTENNIAL
1776-1976